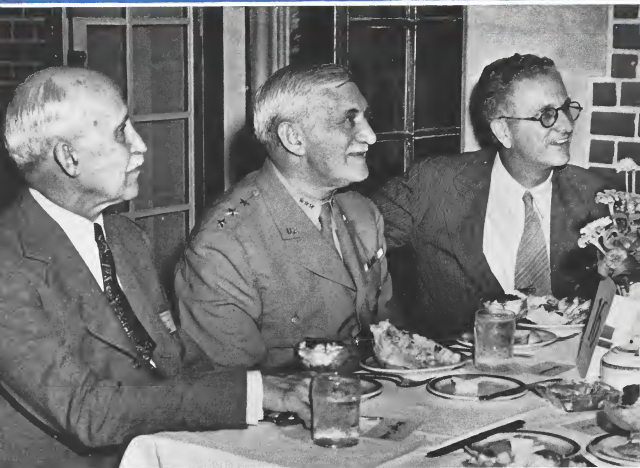


Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC.

AUGUST 28, 1944



Aviation Notables at Wright Field: Three leaders who are making aviation news were caught together in this unusual photograph—Orville Wright, who recently observed his 73rd birthday; Lieut. Gen. William Knudsen who is heading the merger of the Air Service and Materiel Commands and T. P. Wright nominated by President Roosevelt to be Civil Aeronautics Administrator.

AAF Maps Program to Keep Equipment in Top Shape

Asks that 20 percent be replaced annually to assure continued development and maintain strong aircraft industry.....Page 7

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Record War Air Cargoes Handled in First Half of 1944

Total of 22 million pounds transported through joint operations of ATC, NATS and contract carriers throughout world.....Page 33

KEN-RAD Metal Tubes

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THE AVIATION NEWS

Washington Observer

WRIGHT NOMINATION—Nomination of E. P. Wright as administrator for the Civil Aeronautics Authority has been hovering for some time and his selection probably is the forerunner of other moves in the civil aviation administrative picture to give the United States the strongest possible position in forthcoming international conferences. Wright was reluctant to leave the Aircraft Resources Control Office and Aircraft Production Board until he was certain that requirements of the armed forces for aircraft could be met. The fact that he now feels free to leave the production post means that he is satisfied on that score.

WORK CUTBACKS—Wright's agreement to accept the CAA post indicates to observers in Washington that more aircraft cutbacks are in the offing. Insiders find it difficult to see how we will need as many airplanes within the next few months as would be produced under present schedules. Emphasis will remain on heavy, long-range equipment.

INVENTORY CLEARANCE—Reason behind the large surplus declaration now being made by the Army is that it is conducting the first "inventory clearance" since the start of the war. Something to the neighborhood of \$500 million in goods will be turned over to Surplus War Property Administration for channeling into civilian hands or other disposal. While the peace clouds in Europe actually have some effect on decisions, the "clearance" is largely just that and closer to the same type of "sale" that would be held by a department store.

CAR RELEASE—One release that is probably dictated by war necessities is that of 7,000 pas-

senger automobiles from the Army pool. Army has kept only a "small balance" of original 25,000 trucks have been shifted to Treasury Department, or will be sent, together with 75,000 tires. Most of the tires are off-size and go with the off-standard trucks being disposed of. Thousands of the trucks, too, are those that can't be economically repaired and used by the Army but can be patched up and used by civilians. War plants and essential civilians will get the odd as these, of course. Trade priorities come through OIT, passenger cars through OPA.

PRODUCTION SIDELIGHTS—These developments in aircraft manufacturing are topics of conversation in Washington:

Foaling is growing in the industry that all interceptor and fighter type aircraft of the future will utilize jet propulsion, and the transformation may come within five years. Other types of aircraft will convert slower.

Official decision to name the Consolidated B-32 the "Dominator" does not sit well with the manufacturer, which has become identified as the producer of the famous "Liberator." Company pleaded successfully for some title such as "Super-Liberator."

Censors are watching the British air weeklies, "Flight" and "Aeroplane," much more carefully to prevent entry into this country of material not yet released by authorities here. One recent shipment of the "Aeroplane" was held up for days.

Cenozo no longer is building completed aircraft since its famous twin-engined "Boeair" was discontinued for the Canadians.

Switch request for "Caracas" continues to rise and a recent outback ordered at Goodyear may



P-51 Mustang American Mustangs in fighting formation on escort mission.



ing projected, but he asked permission to revise his testimony after his attempt to place the subject off-the-record had been rejected on protest of Rep. Mass (R, Minn.), that no military security was involved. Gen. Echols explained that he was "not sure of his ground," adding that he did know that the Army does not intend to stay in national air transport in competition with civilian.

General Echols told the Woodman Committee that he believed Assistant Secretary of War (Air) Robert Lovett was handling details of conversations with civilian airlines on the matter of civilian taking over ATC routes when the war ends.

AAF To Stay On In Europe—That the Army expects to have to maintain an air force in Europe for some time after the surrender of Germany was indicated by General Echols in his prepared statement in which he said that "the planned operation of the Army Air Forces in Europe following the defeat of Germany" would be one factor in determining the quantity of material that would be destined surplus. Other factors he said, would be the length of the war, including the date by which Germany would be defeated and the rate of military operations up to that date, the planned rate of operations against Japan following the defeat of Germany, logistical policies with respect to type and quantity of material to be transferred from the European and Mediterranean theaters of operation to the Far East, and the means made available for the packing and



NEW BRITISH GUNSLIGHT:

British Air Commission reports efficiency of fighter aircraft has been doubled by the new gun sight. Gun sight now open effective for enemy planes with the speeds of such aircraft upwards of 400 mph, at ranges of over 400 yards and angles considered impracticable only a few months ago.

transfer of such material, the rate of development of new and improved items of material and the consequent rate of obsolescence of material now in air forces stocks, the margin of safety in Army Air Forces stocks determined necessary as insurance for the successful prosecution of the war, and the size of the postwar Army Air Force.

Col. Harris Named ATC Chief of Staff

Col. Harold B. Harris, senior vice-president of Pan American-Globe Airways before being called to active duty with the Army Air Forces, has been appointed chief of staff of the Air Transport Command.

Before his new assignment by Maj. Gen. Harold L. George, Col. Harris was assistant chief of staff in charge of operations and training. He succeeds Brig. Gen. Bob E. Nowland, now commanding general of the Ferrying Division of ATC.

World War Flyer—After service in the Army Air Corps in World War I, Col. Harris was test pilot and chief of the flight test section of the Army Air Corps from 1918 to 1925. He then entered commercial aviation, being called to active duty at the outbreak of war. After

several staff assignments he became commanding officer of the Domestic Transportation Division of ATC until his appointment as assistant chief of staff.

Hughes Bars Plans For Post-War Planes

Expected to build high-performance executive aircraft as well as large land transport and flying boats.

Howard Hughes may be expected to make a commanding post-war position as a builder of specialized aircraft with high speed and high performance and luxurious executive airplane—massive air transports, perhaps bigger than his experimental Hughes-Kaiser HK-1, a 600-900-pound flying boat now approaching completion in Culver City, Calif.

During a press conference, held in Los Angeles to introduce as new director and vice-president of Hughes Tool Co. and general manager of Hughes Aircraft Co., Charles W. Perelle, former vice-president and director of Consolidated Vultee Aircraft Corp., Hughes was the target for a barrage of post-war questions.

Will Maintain Standards—"Our company has been built around super-performance and we will not build floundering planes," he said. Asked if his post-war interest will include development of flying boats bigger than the HK-1, he said, also a big land plane, Hughes replied "probably both."

Hughes declined to discuss details of his post-war plans during his production of military aircraft and accessories.

Kaiser May Build Craft—However, these indications developed during the interview. If HK-1 is a success, Hughes may turn over actual production of the "World's biggest flying boat" to Henry Kaiser. While withdrawn from production of the prototype, Kaiser is believed by observers to be still interested in making his visionary "sluggard" production of big aircraft.

Hughes has in Perelle, who was Corsair's production chief, strong support of his big plane and executive plane views. Perelle is estimated that massive airplanes may reach one million pound gross weight and still pose practical and he feels the post-war market for high speed executive planes will be enormous, larger than the "Corvettes" just to be "traced."

State and Justice Depts. Oppose "Chosen Instrument" Air Policy

Senate Commerce Committee told of stand in reply to request for opinion in connection with consideration of McCarran Bill, letter sent to Roosevelt virtually asking suspension of world air policy discussions till Congress has had time to study possible revisions in laws.

The State and Justice Departments have informed the Senate Commerce Committee that they are opposed to a chosen instrument for international air transportation.

Opinions of the Secretary of State and the Attorney General, requested by the committee in connection with the McCarran Bill, arrived at Capitol Hill at about the same time the committee dispatched its letter to President Roosevelt requesting virtually that the Administration hold up all action on international arrangements until Congress, which has been working on the matter for a year—has had a chance to consider whether it wants to change present laws and policies.

McCarran Bill Opposed—The State Department raised many objections to the McCarran Bill which would lodge all external air operations in one government monopoly. Among these was a blunt statement that the provision of the bill, which in effect makes the Secretary of State an agent of the chosen instrument, runs counter to all known practices and is practically unworkable. The chosen instrument, an effort, was typed as not in the national interest.

The Justice Department refused

of the committee of the subcommittee. Airlines not desiring to join the chosen instrument could apply individually for over-ocean routes, if the McCarran Bill were adopted, but would find themselves in a strict-jail when competing with a line behind which the law placed the entire resources of the government. This would be adequate provision for an anti-trust act.

Letter to Roosevelt—The letter to the President, signed by Senators Joseph W. Bailey, chairman of the Commerce Committee, and Bennett Champ Clark, chairman of the Aviation Subcommittee, contained many statements discouraging the executive branch, but did not appear to alarm the transport industry. It was recalled that that letter, as Aviation News and editorially several weeks ago, was decided upon before Congressional action when Senator Owen Brewster was defeated in his attempt to get a resolution favoring a chosen instrument.

The letter raised all the old arguments familiar to the industry, and effectively answered many times by domestic airline executives, as well as every branch of the government.

These were its main conventional

Shipping companies should not be permitted to run airlines.

A chosen instrument offers many advantages. It has been the choice of all foreign countries in international aviation. (The letter did not add, however, that in foreign countries the chosen instrument has always resulted in government ownership of international air transport system.)

Because Pan American has been successful in acquiring with foreign countries, that system might continue to be desirable. (The letter overlooked the fact that many governments now must not realize only with other governments, and in any case, reciprocity will be sought increasingly, whereas in pre-war days such was not the case.)

There should be a limitation on frequency. The argument was that lower operations cost abroad would enable foreign lines to capture American traffic unless there is a limit on frequency. (It was not mentioned that the Soviet countries, not the United States, seek limitations, out of fear the U. S. will capture the lion's share of the traffic otherwise.)

The letter and a number of important American companies concerned with air as well as surface transportation have presented the advantages of creating a community company.

The number is two, is to be ap-

120 C-69's Ordered

One hundred twenty Lockheed C-69 Constellations are scheduled for production for the Army, two have been delivered and a third is expected this month, was disclosed last week in hearings before the Woodman Post-War Military Policy Committee.

Maj. Gen. O. P. Nichols, Assistant Chief of Air Staff, Material and Services, revealed that delivery schedules called for an eventual 12 Constellations a month.

The first Constellation was built for SNA and has been taken over by the Army. In its first cross-country flight, it broke all existing records for any type of plane.



BLAST FENCES PERMIT CLOSE PARKING:

Lockheed Aircraft Corp., Burbank, Calif., was seen today of these wood propeller-blast fences to permit propeller engine tests of clearly parked P-38 fighters just off the assembly line. Their success on the fighter

winchup ramp has led to installation of similar propeller blast deflectors at the heads of runways of Lockheed Air Terminal to protect adjacent residential property and streets from propeller whiff.

vehicles to support a real high-lift industry.

Both sides have strong arguments, but to date the "purists" are way out in front simply because the airframe group has not yet developed its product. Admittedly the airframe design problem is a tough one, but its supporters firmly believe that private aviation will not be a reality until their job is completed.

All-Purpose Vehicle.—The airframe school has its extremists and conservative elements. The former wants a 100 per cent all-purpose vehicle—something you can run down town to shop in, or fly to work. Opponents can visualize parking a fuselage in urban streets, but can not believe an owner would be willing to disassemble and reassemble the wings and engine every time he wants to go to "work"—something that a foldable-attachable-wings design is developed.

The conservative school thinks the craft should be primarily an airplane, with purely auxiliary means of getting about on the highway. He likes this to a sailing vessel with auxiliary power. He wants to drive the craft to his home from the landing strip or continue on his way. If he must, when weather forces him down.

Landing Gear Problem.—A really readable landing gear is one problem involving weight and gearing power to the landing gear also involves considerable complication. Weight also is involved in folding factor in detachable wings. Neutral shadow of all, however, is the fact that the road vehicle is not a mobile can sustain considerable damage and still be usable. An airplane cannot stand much of a hit without becoming safe.

The "purist" school has some less cause for divergence in its conception, but the landing factor is one point for discussion because it bears so strongly on the ever important question of utility. The landing factor is by far the most popular type, more because of performance than utility. Landing gear has less bulk and less weight than sea-going gear, resulting in less drag and horsepower required.

Trend.—Forward mobility—desires of the vast majority of the air-minded public show a marked trend toward utility as a prime requisite for private aircraft. It is only a trend, however. Speed and high performance still excite the general public's imagination and

form its outmost demand. Therefore, even among those who are really interested in owning an airplane and who are sufficiently ardent to know what they want and what far, indicate that high performance is secondary to utility. The "airframe" character, in some way which may be constantly worked for as a matter of improvement, but utility must be provided at the very outset.

Flight plans would seem to have an advantage from this viewpoint because of the production of waterways in this country convenient to communities. To date the first plane has had considerably less appeal than automobiles. It is such, however, that airplane owners have been considerably happier with their craft than landplane owners, and have had more use of their waterborne craft.

Materiality Rate.—The frailty of the "materiality" rate, i.e., the length of ownership, is the result of public ignorance resulting in improper evaluation of most important aircraft requirements. It seems that as long as the demand for high performance is catered to at the inception of utility, individual aircraft ownership will be of relatively short duration.

Observers feel that as the general public becomes more conversant on the question of aircraft ownership, the first plane will represent an appealing product.

Ideal solution for a pure, all-around airplane is the amphibious type. So far these craft have been only heavy duty sailboats—strictly out of the cheap flying class line. It will offer, however, the most promising prospects of all, satisfying the utility requirements as best as a pure aircraft can.

Small Flying Boat.—Most suitable design approach appears to be the small flying boat with auxiliary retractable wheels. Philosophically, it would be better to mill in a "sea-landing" type because the whole idea is to reduce auxiliary components to a minimum.

A key to what may be very bright amphibious future is progress in certain materials developments. Molded plastic bonded structures of wood or paper may overcome the problems of weight, production costs, and impracticability to corrosion.

Amphibious boats are considered in some quarters to have strong possibilities for adoption of landplane water landing gear and land operations.

20% Saving Claimed For New 18-ft. Props

Hollow steel Corbin Electric blades reported to increase useful load of Army bomber used in test by 400 pounds.

The new 18-foot, two-inch Corbin Electric propellers, which are disclosed as having been in service test on a big Army bomber, are reported, despite their size, to effect a 20 per cent saving in weight over a propeller of comparable diameter with four solid aluminum alloy blades and to increase the useful load of the airplane approximately 400 pounds.

The propellers harness 3,400 hp and more in the sub-sonic speed range and the durability of hollow steel blades makes them lighter than may smaller diameter propellers using aluminum alloy.

15 Inch Blade.—Reverse thrust and automatic feathering are embodied in this installation. The four hollow steel blades, each eight feet 8 1/2 inches in length, are 15 inches at the widest point. The design for this basic 18-foot propeller has been under development by Propeller Division, Curtiss-Wright, in cooperation with the AAF Materiel Command for about three years.

B-29 Plane Needs Given Priority

A nation-wide drive to recruit workers for production of Boeing's B-29 Superfortress is being launched by the War Relocation Commission, which has instituted new war production area in the nation, including No. 1 critical areas having local labor shortages, to support the campaign.

For the first time in the past year and a half, the WRC in Los Angeles, a critical area and warplane production center, lowered the bars to permit Boeing to open a recruiting office for workers, to run recruitment display advertisements in 10 newspapers in the metropolitan area.

Plane Firm Cooperative.—Southern California aircraft companies, including Boeing, are being urged to help the workers, have bowed to the high urgency rating accorded Boeing, indicating the importance attached to the output of B-29's.

Recruiting personnel division has been laboring to attract workers to aircraft plants.

House, Senate Resolutions Ask Formation of Air Policy Group

Commission designed to study problems of military and civil aviation and recommend basic national policies on aviation as instrument of defense and commerce.

Aviation is a step nearer alignment of an Air Power Policy with the introduction of joint resolutions in the Senate and House providing for establishment of an Air Policy Commission to chart a new course based on the nation's future needs.

The aircraft industry's views on air power and its recommendations for an air power policy formed the background for the resolutions offered in the Senate by Senator Murray (D, Mont.) and in the House by Rep. Randolph (D, W. Va.).

Defense.—The Air Policy Commission would be charged with the duty of making a "full study and investigation" of the problems of present and future military and civil aviation and recommending basic national policies on air power as an instrument of national defense and international security and the extension of civil aviation.

The Commission would be composed of two members of the Senate, one from each party; two members of the House, one from each party; and one member of the Executive branch of the government with a background of experience in military or civil aviation, to be appointed by the President and to serve in the personal capacity without status as representatives of their departments or agencies, six public members from industry, science, labor and other sections of the national economy, one of whom may be directly engaged in the aircraft manufacturing or air transport industries, selected by the President. In addition, a clerk would be appointed by the President.

Report in Six Months.—An appropriation of \$100,000 would be provided the Commission for its work, and it would be directed to make a preliminary report six months after undertaking its hearings and deliberations.

The resolutions are the outgrowth of testimony before the War Contracts Committee of the Senate Military Affairs Committee, in the course of which

Senators E. Wilson, chairman of the board of governors of the Aeronautical Chamber of Commerce and vice-chairman of United Aircraft Corp., called the Air Power Policy resolution drawn at the Apr. 26 meeting of the Aeronautical Chamber in Los Angeles.

Urges Air Policy.—Mr. Wilson said that Senator Murray had an immediate requirement in the early delineation of an air power policy for the nation. He cited conditions following the last war, pointing out that the aircraft industry was then faced with destruction prior to the time President Coolidge appointed the Morrow Board.

Public opinion did not support the industry's demand of large increases in production at that time, but at that period, he said, the aircraft industry was able to overcome that period by congressional passage of the Air Corps Act of 1926 and strong orders, bringing this country to this war with technological superiority and the ability to expand rapidly.

Compares Situations.—Mr. Wilson then told Senator Murray that the aircraft industry would not submit, but only the opportunity to compete on constructive ground. He said "we are impressed with the similarity of the situation here and that which existed at the time of the Morrow Board. There was great confusion and uncertainty. Committees met and discussed this whole problem, but nothing happened until the uncertainties were resolved, the principles were made some recommendations which Congress implemented in a policy."

The Aeronautical Chamber, in its April session, recommended formalization of an American Air Policy under four guiding principles.

He said, should maintain air power sufficient not only to win this war but also to keep the peace.

- By acquiring and maintaining air bases essential to our security and that of overseas trade.
- By facilitating the orderly and economic expansion of domestic and international air transport and of private flying.
- By promoting a strong aircraft manufacturing industry.

WEST COAST REPORT

Coast Plants Seek To Publicize Plans

Announcements of post-war programs expected next month, with view to persuading employers to stay on job.

Look for mid-September announcement of the post-war plans of West Coast manufacturers. They are on the verge of convening the War and Navy that disclosure of their plans is necessary to stem an exodus of workers, who will be persuaded to stay on their jobs if assured that a fair percentage will be given continued employment in peacetime production. It is now the military has frowned on all post-war talk and the companies have bowed to the wishes of these best customers.

PLANE MANUFACTURE.—Potentially bad news for railroad and steamship lines, unless they are able to win a place in the air transport picture, is the apparent intention of all West Coast manufacturers toward shoring plans for venturing into a variety of manufacturing enterprises.

Company heads increasingly seem most interested in holding post-war positions, not jobs, then. Surface carriers would rather see them building washing machines and refrigerators. Douglas recently decided fully a number of post-war plans, as well as a new manufacturing deal with Sears Roebuck.

CONVERTIBLE B-29's.—Those who have dreamed through the fuselage of a Boeing Superfortress under construction are impressed by the absence of a bomber's customary hedge-podge of framework within the area. They note that the B-29's fuselage member is into a post-war passenger or cargo cabin.

There are similar rumors of a possible peacetime conversion of Consolidated Valiant Aircraft Corp. B-24's of conversion into a post-war passenger or cargo cabin. They may get into the Pacific light—

—B 8

Wright, World War Robot Expert, Impressed by German JP Bombs

Simplicity of propulsive machinery and easy manufacture compensate for heavy fuel consumption, says co-inventor of airplane on 73rd birthday; scientist's role in world war pilotless plane project revealed.

Oville Wright, who as engineering consultant for the old Dayton Wright Co. in World War I was known as the country's secret project for construction of gyro-controlled robot bombs, admits he is impressed by the simplicity of fabrication of the German jet-propelled flying bombs which have taken much a heavy toll in England.

The German design permits much lower pressures and for this reason probably would require less fuel, but it is simplicity of the propulsive machinery, and its easy manufacture probably compensate for size, he believes.

Stuffed Robot Bombs.—As a member of the Dayton Advisory Committee for Aeronautics, and in his contacts with leading aviation authorities, Mr. Wright has made a study of the German robot bombs.

Only a few people today know that the co-inventor of the airplane and the first man to fly it, Oville Wright, had a part in a robot bomb development project in the World War. The German flying bombs were powered by 48-horsepower motors, and carried tailplane wings. The armature in 1918 stopped the development, and radio-controlled devices since obliterated the project.

Originated in England.—The project originated in England, and the development was supervised as Dayton by Charles F. Kettering. Henry Ford was making arrangements to build engines for the torpedoes, on a mass production basis, when the war ended.

The flying torpedoes carried a 500-pound load of TNT in the nose, and when the device had flown a predetermined distance, governed by an "air lag" device, the wings were dropped off and the nose-heavy target fell to earth, to be exploded by a detonator in the nose.

Used Gire-Flites.—The torpedoes were launched on a four-wheeled carriage which rode on a rail track for 100 feet. The wheels had skids, all controls being in the tail, and these were operated by a

bellevue arrangement, worked by an early gyro-gal, a spy device, according to records in Dayton.

Interviewed at his Dayton experimental laboratory on the eve of his seventy-third birthday, Aug. 19, which Congress took in 1899 designated as National Aviation Day, Wright disclosed that the East Kensington museum in England has asked permission to make a replica of the original Wright Kiteplane, plane, in the event it is returned to this country, as it planned, six months after the war ends, and that some time ago he had given over some plans for the replica which had been sent to England, checking them for inaccuracies.

New Covering Made.—The plane now in London, he said, has virtually all the original structure, except where new covering was placed on it when the plane was restored shortly before sending it to London. The fabric, however, is of the same material as that originally used, and is specially woven for the restoration, by the manufacturer of the original cloth.

The restored propellers of the original plane were never sent to England and Wright still has them.

Urges Army Research, Development Unit

Establishment of an Office of Military Research and Development in the War Department is proposed in a bill introduced by Rep. Snyder of Pennsylvania, to operate under a director and an assistant director detailed from the Army and one officer from the Army Air Force, one from the Quartermaster Corps and one from the Medical Corps as a basic staff.

With the creation of the office, existing operations under Army jurisdiction, which duplicate or overlap in such work as are owned and all military research would be coordinated.

Surplus Bill Delay Causes Pessimism

House measure appears to have little chance of approval by Senate, which has own bill.

The House last week passed its own bill for disposition of surplus government property, but there appeared little likelihood that the measure would get through the Senate as it now stands for the simple reason that the Senate has its own bill, which resembles in no way the one passed by the House.

As the Senate moved ahead with its own measure, apparently without the bill passed by the House, industrial and government leaders were frankly pessimistic that any disposal legislation would be enacted soon. Action on this problem, as in other phases of industrial and human demobilization, has been so heavily slowed and so thoroughly entangled by parliamentary requirements that there was little or no evidence that early action was possible.

Work of House Experts.—The disposition bill passed by the House contained forty-four pages and represented the combined efforts of virtually every member of the House who considered himself an authority on the subject. In brief, it puts full power in the hands of a \$12,000 a year administrator.

In directing sales of approximately \$75,000,000,000 of excess stock, the administrator would be advised by a 16-man advisory board composed of Cabinet-level and agency heads. The board would be advisory only, and all decisions would be made by the administrator.

Senate Bill.—The Senate Military Affairs Committee sent to the floor its own disposal bill which differs radically from the House bill. The Senate measure creates an eight-member board, known as the National Geographic Areas of the Country as well as the different areas of economic interest. Members of this board would draw \$10,000 a year and would have full authority for directing military disposal.

Already the House has defeated a proposal for an eight-member board, claiming that a single administrator could direct the program more effectively, but the Senate is going ahead with its bill, and it is possible that the bill passed by the Senate thus appears little doubt that the conference be-

tween the two houses would extend for weeks before differences are worked out.

Travel Allowances Cut Out.—Meanwhile, the House Ways and Means Committee was demonstrating how far apart the Senate and House actually were on agreeing on reconversion legislation when it started work on the George H. Reorganization Bill. Its first action was deleting, by a vote of 218 to 176, the Senate-approved provision for travel allowances for transporting migrant war workers back home. The committee also was preparing to change drastically the construction unemployment compensation provisions of the measure, which caused it to be tied up for days in the Senate.

With these changes expected to be recommended by the Ways and Means Committee and perhaps supported on the floor, the George H. Bill will face considerable delay in conference.

So far Congress has taken definite action on only one phase of reconversion legislation. Before the recess, contract termination legislation has completed almost more than a year and a half of discussion and consideration. The second and third phases—disposal of property and industrial and human demobilization—appear almost to be far from final action as they were a year ago.

Spring Clutches

Company Is Sold

Assets of L.G.S. Spring Clutches, Inc., have been sold to L.G.S. Spring Clutches Corp., a wholly-owned subsidiary of Curtiss-Wright Corp.

W. Vaughan, Curtiss-Wright president, said E. F. Tison, of Indianapolis, will be president of L.G.S. Spring Clutches Corp. and also will continue as manager of the Indianapolis plant of Curtiss-Wright, propeller division.

Expansion.—Immediate steps will be taken to expand the engineering and sales force of the spring clutch company, Vaughan said, and research and development in the spring clutch applications will be expedited. Now on war contracts, the firm's post-war outlook is regarded favorably because of the wide application of its products.

L.G.S. Spring Clutches, Inc., was incorporated in February, 1920. Its predecessor, L.G.S. Devices Corp., a division of Cord Corp., was started in 1925.

AAF 'Chute Delivery System May Be Used Commercially After War

Procedure perfected by Army is expected to be employed in carrying merchandise to communities lacking landing facilities.

By ALEXANDER MCGURELY

Experiences of the AAF in making large-scale aerial deliveries of ammunition, fuel, food and equipment to troops in advanced bases where other means of delivery is impracticable may serve as a guide to future peacetime uses of aerial delivery of mail and commercial cargo.

While currently AAF Materiel Command engineers who are studying ways to improve further aerial delivery techniques, with and without parachutes, are of the opinion that wherever possible the dropping of cargo by 'chute is more practicable than dropping the cargo in a free fall, they are continuing studies of free-fall drops.

80-100 Pounds.—Among the more novel devices now under study in the personal equipment laboratory, which has charge of cargo parachutes as well as 'chutes for use of air crews, is a free-fall plane, called a "patter" after the single-winged maple seed. Known commercially as the "Sky-Block," the container is attached to a single blade, resembling a propeller blade, and will carry approximately 80 pounds.

Dropped from a plane, it spirals down to a spot landing, unaffected by wind, with the single blade making about 300 rpm. It lands at a falling speed of approximately 18 feet per second, not a great deal faster than the falling speed of a parachute-supported cargo container. Still under test, the container's future development may include the future expansion possibilities for free-fall aerial deliveries.

Chutes Preferred.—Generally speaking the engineers at the Command's big experimental center, Wright Field, Dayton, Ohio, believe that cargo dropped by 'chute is less subject to damage, its location is marked by the parachute when it lands and fairly accurate spot landings can be made.

L.G.S. Spring Clutches, Inc., whose chute is distinguished to permit a more rapid descent.

Cargo 'chutes used by the AAF vary from four to 60 feet in diameter.

Experiences of the AAF in making large-scale aerial deliveries of ammunition, fuel, food and equipment to troops in advanced bases where other means of delivery is impracticable may serve as a guide to future peacetime uses of aerial delivery of mail and commercial cargo.

Overloads.—A standard 24-foot chute 'chute is used for cargo units weighing up to 300 pounds, although some are as small as 200 pounds, making a total weight of 840 pounds, have been successfully lowered by this size canopy.

Newly standardized are bomb-shaped cargo containers made of plastic and suspended on racks under C-47 cargo planes, or to some cases hung on the bomb racks of heavy bombers. A release similar to the bomb-release mechanism drops them from the plane, and as they fall, a container drops a safe distance below, a little less similar to that used to open paratroopers' 'chutes, yanks the cover off the 'chute and opens it.

Containers.—Another interesting new container built up from slabs of plywood fastened together into a bowl-shaped structure. By adding more slats, this container can be expanded to any desired diameter.

Small in wide use are the older type cargo containers, which resemble blanket rolls, but are made largely of felt and covered with canvas. Felt padding at the ends, provides additional shock absorption to protect the contents from severe landing jolts.

Conventional usage of aerial deliveries already have had some application in small communities which have been able to take advantage of aerial service by aerial delivery of deliveries. Since the war, these same communities may be served by aerial deliveries of merchandise from nearby cities.

Contract Schools to Dominate Coast Post-War Civil Aviation

Survey reveals that war pilot training units are in good position with regard to equipment and financing for resumption and expansion of peacetime aviation activities.

By SCHOLER RANGS

Virtually all the nation's existing flying schools will be dominant in the opening of West Coast civilian aviation enterprises the moment war ends.

Presses will find them financially secure, despite numerous contract renegotiations and capable of investing millions in earned and borrowed capital in aggressively planned post-war operations.

Very few enterprises will range from border-to-border chain airport services to local and highly specialized enterprises—flying schools, engine and airplane overhaul centers, charter services, personal aircraft sales, feeder lines and agricultural dusting and seeding.

The extent to which they will aid for the Defense Plant Corp. as loans they now occupy will depend largely upon sales conditions not yet announced by the government.

Projects Held Up: Because many of their planned projects can not be started until civilian flying is restored completely and without wartime restrictions, some can not, for competitive reasons, be announced at this time.

Glen E. Carter, western field liaison representative of the Aeronautical Training Society, national organization of the civil aviation schools, believes the generalized phase of several West Coast schools, obtained from school operators in a survey for AVIATION NEWS, are "an exceedingly moderate indication of what will be seen after Japan is whipped."

May C. C. Mosley, operator of Cal-Aero Academy at Ontario, Calif., Polaris Flight Academy, Lancaster, Calif., and Mira Loma Flight Academy, Channah, Calif. (owner consolidation of the Polaris contract Mira Loma has been transferred to Lancaster) un-

assuredly will be an outstanding figure in western civil aviation.

Refresher Training: He is confident that civilian schools will continue to handle Army Air Forces primary training, and instruction designed to convert military pilots into commercial flyers. He believes, too, that the schools will be used for refresher training of reserve officer pilots. Accordingly, he plans continued operation of Cal-Aero and Mira Loma.

Mosley also will continue into the post-war period his war-expanded enterprise at Grand Central Air Terminal in Glendale, Calif. These include Curtiss-

Wright Technical Institute, organized in 1929 and now one of the nation's largest aviation mechanics and aeronautical engineering schools; Aircraft Industries Co., now being equipped with sound-proof test and preparing for overhaul of all makes of aircraft engines. (A.I.C. also is western distributor for Wright, Lycoming and Jacobs engines, and Curtiss-Wright propellers); and Curtiss-Wright Tech's Special Devices Manufacturing Division, scheduled to begin construction of Army and Navy subunit training units to manufacture of training and demobilization units for a wide range of civilian mechanical products.

Glendale Port Development: If Glendale permits post-war flying on Grand Central Air Terminal, its runway extended to 5,000 feet for use as a military base, Major Mosley, as operator of the airport, undoubtedly will seek maximum development of the airport for feeder line, fixed base and personal aircraft uses.

Currently prominent because of its coast-to-coast liner airline prospects, Southwest Airways is known to be considering the post-war operation of at least one of its three war training bases—Thunderbolt Field, Glendale,

They wouldn't fly without them...



Mascot of a Fortress crew who never flew without him, this Scottie had his own oxygen mask and parachute. On duty at Pearl Harbor December 7, at the Battle of Midway and the Guadalcanal campaign, he logged over 800 flying hours.

A pair of patent leather dancing slippers always decorated the feet of a co-pilot who had worn them on his last civilian date. They went on many a mission over Germany, worn under his flying boots.



A careful navigator used one of his best girl's nylon stockings to wrap around the lenses of his precious sextant.

WESTERN POST-WAR CONFERENCE

Thirteen members of the Western Information Council of the Aeronautical Training Society met in San Diego to plan the distribution of a forthcoming ATS questionnaire on post-war plans of member Army Contract Flying Schools. Left to right, standing, are Earl D. Prodder, vice-president and general manager, Ryan School of Aeronautics; Harry Shepherd, Ryan public relations assistant; Frank Rose, public relations manager, Mira Loma and Cal-Aero Flight Academy; Glen E. Carter, western field liaison representative, ATS; William L. Wagoner, Ryan public relations director; Walter Behner, public relations director, Ronkon Aeronautical Training. Seated, left to right, are Delbert Kewerth, public relations director, Hancock College of Aeronautics; Keith Morrow, Ryan publicity manager; and Harry Donahoe, editorial director for May C. C. Mosley enterprise.



ETHYL is a trade mark name

Ethyl antiknock fluid goes along with fighting planes powered by U. S. made gasoline. It goes into practically every gallon of fighting grade aviation fuel—which is one reason why our fliers not only have the best gasoline—but plenty of it.

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DISCUSS PRIVATE FLYING

Private flying and the role it will play in relations with South America was a subject at a recent session of the Personnel Aircraft Council. Its informal conversation are John E. P. Morgan, manager of the Personnel Aircraft Council; Morris Munster, director of aviation for the Coordinator of Inter-American Affairs; and Carl Harrison Brand, of the Aeronautical Chamber of Commerce.

Ara, Thundersfield II, Phoenix, Ariz., and Falcon Field, Mesa, Ariz.

Thundersfield Field—Leland Hayward, Southwest's president, prominent as a Hollywood motion picture agent before his aviation venture and his partner John Connelly, may be expected to negotiate with ZPC for title to elaborately equipped Thundersfield Field, streamlines from Phoenix, and capitalizing on its dramatic name as a base for civilian school and provide flying operations.

Hayward also may convert Thundersfield Field—already thoroughly equipped with modern hangars, powerhouses, pools, hangars and shops—into an aviation country club, following to some degree the pattern of Arizona's dude ranches.

Meanwhile, however, Hayward and his associates, among them James Ray, vice-president, one of the nation's foremost aviators and helicopter pilots, are concentrating their past-war planning energies on three feeder line applications: a 21-route coastal system teaching 252 cities and towns, a 24-route system in Texas and Oklahoma planned to serve 221 cities and towns; and a three-route helicopter air mail and express system to serve the Los Angeles greater metropolitan area, servicing 86 post offices.

Tex Rankin—Among the West Coast's most colorful school operators is J. G. "Tex" Rankin, head of Rankin Aeronautical Academy at Tulare, Calif. Rankin's pre-war fixed base school and charter operations in Portland, Ore., and at Lockheed Air Terminal, Burbank, Calif., are an indication that he will not be content with confining his post-war operations to one or two bases.

"Tex" Rankin's name is still highly known in its dramatic name as a base for civilian school and provide flying operations.

Rankin's name is still highly known in its dramatic name as a base for civilian school and provide flying operations.

Henry S. White—When the war training contract of Coast Aviation Corp. at San Palco, near Fresno, Calif., is terminated, the school's operators, Henry S. White and associates, will be ready to launch a number of fixed base operations, a mechanics school, an aircraft service agency, and very likely an aggressive personal aircraft sales organization.

Blod Pre-War School—White's Palo Alto Airport, Inc., operating from Del Rey contract school at King City, Calif., prior to the war, operated a CAA-approved school and repair station, and was California and Nevada distributor for Sparrow, Kevorpe and International airplanes. White is credited with having sold personally more air-

planes in the West than any other person during the years 1929 and 1940.

Post-war plans of Ryan School of Aeronautics, operating contract schools at Hemet, Calif., (which may continue in operation after the war) and Tucson, Ariz., already have had extensive announcement, and include resumption of civilian school activities as well as local feeder line and international airline operations, as circulated by CAA.

Of all the West Coast contract school operators, Harry Claiborne and his associate Bruce Miles, of Chibola, Flight Academy, Wickiup, Ariz., are the only ones who definitely indicate disinterest in post-war fixed base and school operations. They announce that they plan to develop an inspiring and inspiring business in China and Japan when the war comes to an end.

Hancock College of Aeronautics—This school, founded in 1937 by G. A. Hancock, wealthy West Coast oil man, and converted to civil contract school, is expected to resume civilian operations. Its training contract canceled, Hancock is retaining intact its structure of operating personnel at Santa Maria. Hancock's endowments to the University of Southern California in Los Angeles have left some observers to believe the school may become a part of U.S.C.

Of the Coast's 16 contract schools in operation at the peak of military pilot training, five already have been converted to civil. Twenty-Nine Palms Air Academy, glider and power light school at Twenty-Nine Palms, Calif.; Moon Air Academy, Myrtle, Calif.; Coast Flight Academy, Hancock College of Aeronautics, and Palmar Flight Academy.

More Schools to Close—Recent contract cancellations will close the following schools by the end of the year: Palmar Flight Academy, Ryan School of Aeronautics at Tucson, Cal-Aero Flight Academy, Palo Alto Airport's King City school, J. Lloyd O'Driscoll's Ventura-Danville School of Aeronautics at Visalia, Calif.; and Southwest Airways' Thundersfield II at Phoenix.

No contract terminations are in view immediately for Ryan School of Aeronautics at Hemet, Southwest Airways' Thundersfield II at Glendale and Falcon Field at Mesa, Mira Luna Flight Academy, Rankin Aeronautical Academy at Hemet and Coast Aviation Corp. at San Palco.

THE AIR WAR

COMMENTARY

Crushing Air Blows Expected To Clear Path to Philippines

Coordinated attack believed likely as result of recent conference; Mindanao already under attack by Gen. Kenney's Liberators from bases in northwestern tip of New Guinea; Halmahera group holds significant position on way to Davao.

The free possession of the strategic Marianas sets the stage for the next act of the last-summer Pacific drama. Powerful land-based air task forces under Admiral Halsey (Third Fleet) and Admiral Spruance (Fifth Fleet) are preparing to carry the war closer to Japan on a practically a one-step basis, one striking while the other builds up strength for a new blow. Saipan, Tinian and Guam contain three excellent harbors and ten large aircraft carriers. Fifty hundred miles to the north lie the Ogasawara (Bonin) Islands, a ladder chain heading straight for Tokyo. Already these islands are in the process of neutralization by Maj. Gen. Willis Hule's Liberators and preliminary blows from a naval task force. And 1,500 miles to the west lies Mindanao, already under air attack by Lieut. Gen. George Kenney's Liberators from the northwestern tip of New Guinea. It may well be that the next conference to be held by General MacArthur and Admiral Nimitz will be on Davao, Mindanao's southern port.

Stepping Stones—It is hard to say whether the ground army base at Truk will continue to be neutralized by air attacks of Maj. Gen. "Bull" Halsey's Thirtieth Air Force from bases in the Admiralty Islands. Seventh Air Force basing from the western Marianas, or whether it will be captured and used as a base for our own naval operations. In any case it appears almost certain that the powerful assembly bases of Yap (including Ujifui) and Palau (including Ngulu) in the western Carolines will have to be occupied to protect our flank; Palau is some 500 miles due east of Mindanao, and probably is more powerful than

the much-heard-of base at Truk. Similar steps are indicated in General MacArthur's return to the Philippines from the southeast. When his forces landed at Sanagor four weeks ago it was termed the last operation of the New Guinea campaign, a campaign which in a month advanced our lines more than 1,360 miles along the northern New Guinea coast. By means of our air blockade the enemy is now no longer able to operate by air or sea beyond the Halmahera-Philippines line, the main defense of their acquired empire in the southwest Pacific. From Sanagor to Davao is 675 miles, with the Halmahera group holding a position of considerable strategic significance along the way.

The Halmahera Islands—This is the northernmost group of the Moluccas, or Spice Islands, and comprises the large sprawling island of Halmahera itself (6,000 sq. miles), with the small island groups of Bajau and Obianje to the south and Morota to the north. The latter is almost directly on the oceanic route from Sanagor to Davao, southeast less than 100 miles. Its possession would bring southern Mindanao within easy range of Liberators with normal loads, plus fighter escort.

The Japanese have been fully aware of the strategic importance of the Halmaheras, and during the past year, while our New Guinea campaign was in progress, have constructed a number of new airfields, and have made extensive use of the harbors in inter-island shipping.

It was largely from Halmahera that the seemingly endless supply of Jap bombers and fighters were flown in the big enemy bases

of Lae-Salamora, and later Wewak and Hollandia, the smothering of which played such an important part in the Jap-flogging New Guinea campaign.

Targets—Halmahera—An air force advanced westward (Halmahera, Apr. 24; Waka Island, May 17; Suk Island, May 27; Nomonor Island, July 3, 1944; and July 20), Fifth Air Force bombers began systematic attacks on enemy shipping in the Halmahera area, with ever increasing success. Practically all heavy shipping has been driven from the southeast of the Mindanao-Halmahera line and south through the Molucca Sea to Ceram (Ambon, chief port). During the last week of July, large-scale air attacks were begun on Halmahera air bases.

Lockheed P-39s had picked up a considerable concentration of enemy aircraft at the major fields of Gelaia, Mui and Lolobata. These were attacked on the 25th by 12 groups of P-39s, escorted by Lightnings, some 30 tons of bombs being dropped; 39 Jap planes were destroyed on the ground and 18 shot down in combat against a loss of two P-39s, one pilot being wounded. Low-level strafing by P-39s and P-51s also caused considerable damage.

A second heavy attack (on Gelaia and Lolobata) was made on the 26th, with similar results. These were followed on the 27th by a third attack, again Aug. 7, with some 20 enemy aircraft reported wrecked on the ground or damaged. Every air operation was consistently weak at all these attacks.

Knockouts—With the heavy attack on Mui Island Aug. 13, Liberators and Mitchells dropping 87 tons of bombs and destroying 23 planes on the ground, it was reported that for the present at least Sclerobara is an air base was practically neutralized. Some 134 aircraft were destroyed and installations wrecked. It is significant that the same week witnessed three night raids in succession on Davao from New Guinea.

The way for the final jump to the Philippines is rapidly being prepared. And when we are there, good-bye to the Celebes, Borneo, Sumatra and giant south. With Jap air still in the air, the "train set off, the way to the inner defense line of Formosa and the Ryukyu Islands, and the landings on the China coast may proceed apace.

Continued



By the time it is flown and it will

The story behind the Boeing Superfortress

Remember back to January, 1940? The war in Europe was not yet five months old and war with Japan still two years away, but the U. S. Army Air Corps even then discerned they must have an airplane that would carry a heavier bomb load further, faster and higher than any would had ever known.

Leading aircraft companies were invited to submit designs.

In February, three days before Hitler landed the Low Countries, the Army suddenly increased its specifications. These new requirements made the design problems still more difficult. But Boeing—with its untapped bank of engine experience in building such planes as the Flying Fortress.

the Stratoliner and transoceanic Clipper—was in the best position to solve them.

Wind tunnel tests of the Boeing model impressed the Army that Boeing was authorized to build their experimental airplane. And then—six months before the first of these had been completed and flight tested—the Air Forces decided that this was the world's number one bomber! Quantity production was ordered—out of the present successful progress now put behind any version of war. The program eventually included the Bell and Martin planes as well as three Boeing plants and literally hundreds of subcontractors.

This placed upon Boeing a tremendous responsibility not only in successfully

engineering the design but also getting a safe production.

A master plan had to be created . . . factories built . . . new tools designed . . . concentration of production merged in all participating plants.

So sacred was the basic design that not one major change had to be made when actual flight was put under way. And approximately a year and a half later the first production models were heading Japan.

Superfortresses are taking their place along with the fastest Flying Fortress as Boeing's effort to provide the Army's great bombing crews with the best possible airplanes to accomplish their hazardous and important mission.

BOEING

REMEMBER OF THE FLYING FORTRESS • THE NEW B-29 SUPERFORTRESS • THE STRATOLINER • TRANSCONTINENTAL CLIPPER

AVIATION NEWS • August 25, 1944

PERSONNEL

Boeing Aircraft Engines Division of Fairchild) Ragnan and Airplane Corp., announced appointment of three executives to key posts. Frank M. Begley (right) has been named secretary



Begley Street Smith

director. He has been serving with the Army Air Forces as a special investigator for the Eastern Procurement District and has been with the AAF's Office of Legislative Service in Washington. James F. Stangor (center) is now director of industrial relations, having joined Boeing from the Huppenthal-Ridgelys Corp. Clyde E. Smith (left) has been appointed assistant manufacturing manager and will have charge of production of the firm's Andover auxiliary power plant units and sub-components for Packard, as well as production of Ranger engines.

Ned C. Mosley, formerly superintendent of stations for National Airlines, has been appointed New York City station manager, with headquarters at LaGuardia Field.



Announcement of his new position was made by H. S. Parker, Jr., SAA, vice-president in charge of traffic.

Robert L. Briss has been named vice-manager of the Chicago Plant of Pittsburgh Survey and Bath Corp. George H. Lee, former works manager, will now develop his entire time to experimental and advisory work for all the plants of the corporation.

William H. Thompson, station manager for United Air Lines at Lockheed Air Terminal, Los Angeles, has been transferred to an overseas base in connection with United's new Pacific operations for the Army Air Transport Command. He is succeeded by Charles Wrigglesworth, former

Los Angeles station manager, who has been in Pacific Operations activities for United.

Malby M. Bell, a director and secretary of R. F. Goodrich Co., died of a heart attack while flying in Cleveland from Detroit. He had been secretary of Goodrich since 1937.

Helen Schramm, widely known in the aircraft manufacturing industry, has resigned from the Associated Chamber of Commerce after 12 years with that organization, being one of the oldest employees in point of service. She was one of the original employees of the Chamber office in Washington.

Carl Quase, formerly superintendent Air Cargo Military Transport division for National



Airlines, has been promoted to assistant in the vice-president in charge of operations covering general operations. Quase obtained an airplane and engine mechanic's license in 1930 and later joined United Airlines. He has been associated with United Air Lines, Boeing Airways, American Airlines and Chicago and Southern Airlines.

Mrs. Wilbur B. Noll, formerly chief clerk in plant engineering at Consolidated Vultee For Worth division, has been named chief counselor with Mrs. Ruth S. Clarke, as assistant.

Norton C. Sullivan, manager of the Miami division of Consolidated Vultee Aircraft Corp., has been transferred to a similar post at Convair's New Orleans division, effective immediately. Sullivan will be succeeded by H. B. Cooper, Convair division manager at Elizabeth City, N. C.

Glenn L. Woodson has resigned as vice-president of Bell Aircraft Corp. and manager of the Georgia Division. He has joined Hughes Tool Co., Houston, as vice-president in charge of the Hughes Company's aviation branch. His headquarters will be in Los Angeles, where he will work with Howard Hughes, head of the company. Management of the Marietta, Ga., branch plant, production of the B-29 "Superfortress," will be taken over by Lawrence D. Bell, president of Bell Aircraft.



WINS SERVICE PIN:

J. P. Kurtz (right), purchasing director for Pennsylvania-Central Airlines, was given a two-year service pin by transporter and controller Ray G. Lockel. Kurtz is president of the Purchasing Agents Association of Washington, and a member of the Purchasing Committee of the Air Transport Association.

Two United Air Lines pilots on military leave have been cited for heroic and commendable service while actively participating in the airborne invasion of France. Lieut. Col. Stanley C. Hoyt was awarded



Hoyt Powell

the Distinguished Flying Cross as a troop carrier leader of the Cherbourg airborne. Lieut. Col. Leon N. Powell has been appointed group executive officer within the Ninth Air Force. His plane was in the lead position of the right column of a 100-plane formation which spearheaded the "D" day operations in the Normandy theater.

F. E. Chambers, formerly of Consolidated Vultee's Fort Worth division, is wage and salary supervisor in the Miami division. He succeeds C. E. Nelson, whose new duties will be devoted to special assignments.



Chambers was with Republic Airlines Co. for 11 years prior to joining Consolidated Vultee about two years ago.

GOODYEAR AIRCRAFT PRODUCTION REPORT

CONTRACTS: WBSAC - (3243, 1837, 1867, 2161, 23434)

MARTIN B-26 (Marauder)

1200 SETS:AILERONS, FLAPS, FINS,
RUDDERS, STABILIZERS, ELEVATORS

DESIGN CONTRACT RECEIVED: DECEMBER 1939

FIRST PRODUCTION UNIT DELIVERED: JUNE 1940

INITIAL CONTRACTS COMPLETED: JULY 1942

Remarks: Production of components for these famous medium bombers followed their detailed structural design in the Goodyear aircraft Engineering Department. Manufacture of B-26 components continuing far beyond these initial contracts still goes on, and has led to award of contracts for other components to Goodyear. Exceptional performance of the B-26 and its remarkably low percentage of battle losses attest both excellence of Martin design and Goodyear craftsmanship.

Goodyear is building components for various different Army-Navy types of aircraft, including complete C-47s, fighters and divebombers.

HOW GOODYEAR AIRCRAFT CORPORATION SERVES THE AVIATION INDUSTRY

1. By constructing components to manufacturers' specifications.
2. By designing parts for all types of airplanes.
3. By re-engineering parts for mass production.
4. By building complete airplanes and airships.
5. By extending facilities of Goodyear research laboratories to aid the solution of any design or engineering problem.



Knox, Ohio

Elizabeth Park, Arizona

WAR BONDS BUY THE WINGS OF VICTORY

AIRCRAFT PRODUCTION

Pressurized Cabin One Secret of B-29's High Altitude Performance

Method of pumping compressed air from turbo-superchargers into cabin eliminates necessity and inconvenience of oxygen masks.

The ability of Boeing's B-29 Superfortress to operate at extreme altitudes is due in large part to the pressurized cabin, until now one of the closely-guarded secrets of the bomber now making periodic trips on Japan's industrial centers.

Compressed air from the turbo-superchargers is introduced inside the cabin while the airplane is flying in the thin air of high altitudes at the same time that a certain amount of air is released from the cabin, thus maintaining near-normal air pressure.

Pressured Field Casualty—There is no attempt to maintain sea-level pressure, but instead some comfortable flying altitude, usually between 10,000 feet is selected for the start of pressurization. Up to this selected point, pressure inside the airplane decreases in the same ratio as pressure outside as the airplane climbs.

Above this selected altitude, however, the pressure inside is held constant, in spite of decreasing outside pressure, by introducing air

into the cabin while the flow out of the cabin is gradually decreased. As the airplane climbs, more air is pumped into the cabin to maintain this constant pressure. Thus, at 30,000 feet, for example, the occupants of the plane fly with the same comfort as they did at lower altitudes. The application of this to peace-time flying is obvious.

Advantages—One great advantage of the pressurized cabin is that lack of oxygen and ascorbation. (Aviator's bends) are prevented without the use of cumbersome oxygen masks and employment of other precautions. Until the advent of the pressurized cabin, high-altitude flying was possible only with the use of oxygen masks.

The pressurization feature of the B-29 was an outgrowth of Army experiments in pressurizing an airplane and of Boeing pioneering in developing the pressurized Stratofortress transport which was in use for about a year before the war.

Answering Oxygen Problem—The Army asked Boeing in 1936 to sub-

mit plans for pressurizing the cabin of the Flying Fortress. At that time Boeing had just developed the Stratofortress. While Boeing had applied the principle to commercial craft, the Army's thinking in the meantime had crystallized along the same lines in regard to bombers.

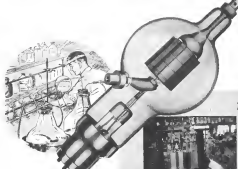
The Materiel Command was convinced that a pressurized bomber could eliminate oxygen masks, which were satisfactory for high altitude missions of short duration, but on long missions the use of the oxygen equipment impaired the efficiency of bomber crews.

Boeing turned its experience in pressurizing the Stratofortress into building the B-29. That a peace-time development went to war in contrast to the many war-time aviation developments which will be put into peacetime operations.

Boesewitz—Main objective of the pressurized cabin is to deliver the bomber's crew to its target in top physical and mental condition.

The thousands of hours' research spent on the project paid off in such toll-free results as the improved heating system, a better sealing compound for the bomber's skin joints, a more efficient gasket to prevent air leakage where control cables pass through bulkheads, a superior air-pressure control valve, a method of patching small bullet wounds sustained while the bomber is under pressure and other features.

Many of the developments in the pressurized cabin will be applicable to commercial transports after the war.



A few of the branches of the Science behind the Science of Electronics

the Science behind the science of electronics

The progress of progress in the science of electronics is dependent on the advances in creating and developing new and more efficient electronic vacuum tubes. That fact, by itself, makes the science of electronics a complex task of research and development—creating the scientific applications of many sciences—computing the old science behind the science of electronics.

To create and produce the modern vacuum tube requires experience and skill of the highest order in their many sciences in addition to complete mastery of their application. The list includes everything from chemistry and metallurgy—the technology of glass fabrication and vacuum pumping—to physics, optics, dynamic dynamics and some importance of all—Electronics.

The resources and researchers of these laboratories have concentrated their work on understanding contributions to the science of electronics. A few which are noted by the main body which form the science of electronics.

These contributions are continuously being added to science books and books which are the result of their work.

Basic Engineering is devoted solely to the development and production of electronic vacuum tubes. However, since the electronic vacuum tube is the basis of all electronic devices it is advisable for scientists and prospective users of electronics to look first to the vacuum tubes required. A new understanding your problem will bring advice and solutions without cost or obligation.

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Boeing's B-29 Pressurized Bomber—This is the first sketch released showing a cross-section cutaway of Boeing's Superfortress and shows the pressurized sections of the bomber. The forward control cabin, housing the pilot, co-pilot, bombardier, navigator, flight

engineer and radio operator, is connected with the gunner's compartment midship by a circular tube, large enough for a man to crawl through, opening the nose-pressurized bomb bay. The tail gunner's compartment is the third pressurized section.



GREEN ET AL.—Studying the structure of the Electron Laboratory



REYNOLDS ET AL.—Scientific Application of the Science of Electronics



VICTOR THOMAS ET AL.—Creating the Science of Electronics



REYNOLDS ET AL.—Scientific Application of the Science of Electronics



GREEN ET AL.—Studying the Structure of the Electron Laboratory



REYNOLDS ET AL.—Scientific Application of the Science of Electronics



THUNDER OUT OF RUSSIA!

You, now are the Red Men of Russia on hundreds of American-built Thunderbolts fighting on the Russian front. At the controls are daring Russian pilots daily pouring destruction upon Hitler's overbearing forces.

For the Russians have found that the swiftness of the Thunderbolt's eight 30-caliber machine guns makes it a worthy companion of their own famous Su-26 for ripping tanks, locomotives, fuel dumps and other enemy targets in the ground.

The air forces of England, France and Brazil have also adopted the Thunderbolt as a weapon to ease the demands of many tactical situations—from high altitude fighting to low level strafing and close bombing. And that it is that Thunderbolt squadron are converging upon enemy strongholds from every United Nations

front, helping draw our eyes right to the masses of vicious attacks.

The production in quantity of this lethal, swiftness fighting plane continues. The courage and skill of the United Nations pilots who fly it are known and feared in Tokyo as in Berlin. And with these pilots into every battle go the horns of the Thunderbolt here in Republic who are pledged to keep the Thunderbolts rolling and there's nothing left to shoot at—high or low! Republic Aviation Corporation, Farmingdale, Long Island, New York, and Greenville, Indiana.

Republic first in war point to first in peace

REPUBLIC AVIATION

CORPORATION

Specialists in High-speed, High-altitude Aircraft

Operations Started At Rio Engine Plant

Limited production reported at Brazil factory, built and equipped under lend-lease.

Brazil's airplane engine factory, built and equipped under lend-lease, has begun operation in a limited production schedule chiefly designed to service engines for military aircraft.

Replacement parts will constitute the most important immediate production, but it is planned to have the plant, owned and operated by the Brazilian government, producing 450 hp. Wright and inline air-cooled Fairchild Ranger engines next year for installation in Brazilian-built planes.

Work Began in 1943—The new reinforced concrete factory is 22 miles from Rio de Janeiro on a reclaimed marshland. Work on the factory was started in July, 1942, after Gen. Antonio Guedes Soares, of the Brazilian Air Force, had obtained American agreement to build and equip the plant as part of lend-lease aid given Brazil.

Most of complete equipment has been sent to the plant, but this is expected from the United States soon, South American sources say.

Uses Brazilian Labor—The factory will use all Brazilian labor to produce an expected 500 engines a



MASS PRODUCTION OF DROP TANKS

Streamlined production methods are being utilized by Weber Shoups and Futura Co., in Los Angeles, to turn out quantities of drop tanks for fighter planes. The company, which made iceboxes and stove fixtures before the war, has changed the stove punch to shape tank halves.

year. There will be installed in a new all-steel plant to be produced in quantity in a plant under construction at Lagoa Santa, state of Minas Gerais. It is understood that a prototype of the plane has been built, and pictures show a tri-

motor ship somewhat resembling a twin-engine biplane.

Provisions have been granted for the engine construction by Wright and Fairchild. Brazilian sources say it is hoped to supply many of the planes needed for peacekeeping aviation in that country from the new plants and others that may follow as experience is gained.



7,000th LIBERATOR HEADS FOR WAR:

First flight phase of the "V-Queen" 7,000th B-24 Liberator produced by Consolidated Vultee and the 5,000th manufactured at the San Diego plant. The plane, decorated with the signatures of 7,000 Consair employees, was formally christened at Mitchell Field, N. Y., by a 39-man AAF combat crew.

ASC Group Selects Spares for B-32

Progress being made by Consolidated Vultee in manufacture of their new big B-32 bombers is indicated by the fact that an Air Service Command spares provisioning team has met with company officials and representatives of the Navy and the RAF to select critical parts needed for maintenance of the planes in training and combat areas.

Data Studied—Company officials said the B-32 will be one of the best provisioned airplanes from the standpoint of spare parts that they have ever delivered. Technical data obtained from specialized depots, major overhaul bases and records maintained throughout the world were utilized in the selection.

In addition to the selection of spares, two ASC tooling engineers



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MAN'S FIGHT TO FLY

By JOHN P. V. HEINMULLER

Chief Timer, National Aeronautic Association, Federation Aeronautique Internationale, and President of the Langley-Wittnauer Watch Company

Foreword by CAPTAIN EDDIE RICKENBACKER

HERE ARE:
 World's Speed Records
 World's Altitude Records
 Top Flight Records
 Biographical sketches of the outstanding flyers
 Record the World Flights
 The story of the future "River of the Air," the Heliporter
 Development of the Sideroad and Civil Time Chronometers
 Records of the Autogyro
 The story of Meers and Celler, pioneers for correct time in the air
 A complete Chronology of Aviation from Leonardo da Vinci's earliest designs to successful planes of today



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worked with Convair service engineers in choosing special tools and equipment to be used in maintenance of the B-32.

Cutbacks to Release 300,000 Within Year

100,000 fewer workers to be needed by end of 1944 as result of schedule changes, Gen. Echols tells Senate Committee.

Aircraft production cutbacks may be expected to continue until the whole story has not yet been disclosed, but it appears that nearly 300,000 airplane workers will be released by the middle of 1943. Maj. Gen. Oliver P. Echols, assistant chief of air staff, told the Senate War Investigating Committee that cutbacks will release approximately 100,000 aircraft workers by the first of the year.

Schedules Shifted—The Army's cutback announcement two weeks ago emphasized that concentration on the output of Boeing's B-29 and Consolidated Vultee's upcoming B-32 bombers was the impelling reason for the production schedule shifts which involved principally C-47s, B-24s and P-47s.

It developed that Ford's Willow Run plant, instead of the timing reduction announced two weeks ago, will be slowed down to 50 percent of current output of B-24 Liberators. This may be in preparation for other plants not yet announced. Willow Run at present is turning out about one bomber an hour. Some 15,000 workers probably will be released as a result of this reduction.

Efficiency Law Less—Lessons in fewer workers have been much less than expected, which accounts in part for the production shifts, although the Army plans to keep equipment in condition in the event that their plans go wrong as has been the case with the recent shortage of tanks developed after a sharp tank production cutback.

Gen. Echols reported that approximately 1,000 "obsolete" and unusable airplanes have been turned over to the War Relocation Administration for disposal and that additional planes will be added in the next two or three months.

Maj. Gen. Lucius D. Clay, director of material in the Army Service Forces, expressed a doubt that any large quantity of Army supplies would be returned from Europe to be sold in this country.



New Blimp Prop—First advance of fully-controlled reversible-pitch propeller to lighter-than-aircraft is on Goodyear's big M-1 blimp. This new craft uses the Curtiss electric propellers as brakes without reversing their direction. The blimp can be brought to a virtual standstill in the air by reversing the blade angles.

Reversible Pitch Prop Used on Blimp

Fully controlled reversible aircraft propellers have been adapted to lighter-than-aircraft on Goodyear's M-1 blimp, enabling the operators to use the propellers as brakes.

Operation of the propellers as brakes is accomplished without reversing their direction. The blimp can be brought to a virtual standstill in the air by reversing the blade angles of one of its Curtiss electric propellers to create reverse or backward thrust.

Used on Flying Boats—Reversible thrust has long been used to give Navy flying boats increased maneuverability and engineers report that the controllable feature permits adjustment of blade angle in flight and contributes to faster take-off with heavily loaded craft.

New Plastics Firm

Announcement of the formation of Resin Industries, Santa Barbara, Calif., has been made by Grant C. Ehrlich, president, who says the company will serve the West Coast in the field of synthetic elastomers and will provide engineering and production service to members of the aircraft, shipbuilding and allied industries.

Reversible Pitch Prop Used on Blimp

Fully controlled reversible aircraft propellers have been adapted to lighter-than-aircraft on Goodyear's M-1 blimp, enabling the operators to use the propellers as brakes.

Ehrlich pointed out that the past few years have seen the application of synthetic compounds of the thermoplastic type in many fields, but their outstanding wartime use has been in electrical equipment, wire and cable.

Cutbacks to Release 17,000 at Dallas

North American Aviation will release 17,000 workers by mid-November as a result of the cutbacks in B-24 Liberator production at the Dallas plant.

J. H. Knudsenberger, president, and fiscal director of all workers will be made in November last that the production of North American's P-51 Mustang will continue well into 1944 and that the present production rate on AT-6 Texan trainers will continue on present schedule through November, decline in December and January and then level out at approximately six percent of present production.

Terminations Drop—Gradual de-

close in employment terminations already has started with a layoff of 1,467 and will reduce the labor force to approximately 17,500 by Nov. 15. No reduction in work week hours to retain personnel is planned and Kindelberger believes a reported 32-hour-week is impractical.

Research Puts Pesco In Good Position

Firm paves way for post-war operation with development of peace-time products in spare time.

Wartime research into aircraft hydraulic and vacuum equipment by Pesco Products Co., Cleveland Division of Borg-Warner Corp., is expected to result in widely divergent uses of the principles learned in industrial, automotive and farm machinery fields, as well as a continuing and increased use in aircraft products.

"While we intend to keep primarily in the aircraft accessories field, we expect to broaden the applications of our research to many types of ground machinery," Robert J. Marshall, Pesco president, stated.

► **New Brake Unit**—Pesco engineers demonstrated a new vacuum



NEW BRAKE INTENSIFIER:

Recently developed brake intensifiers are checked for performance in the experimental laboratory of Pesco Products Co., Cleveland, a division of Borg-Warner. The intensifiers have many peacetime applications both for aircraft and ground vehicles. These units will increase the power application of hydraulic brakes while lightening the foot pedal load.



WORKERS FOLLOW THEIR BOX SCORE:

This scoreboard at the Farmingdale, L. I., plant of the Republic Aviation Corp., tells the employees that their war work makes possible the one-sided score set up by American pilots in the European and Pacific war theaters against the best planes the Axis can throw against them.

brake intensifier unit for increasing hydraulic brake pressure while lightening the foot pedal load, equally applicable to brake systems of large aircraft, trucks and buses and showed a new clutch actuator utilizing the hydraulic principle with potential applications to various automotive, industrial and construction machines stiffening clutch equipment. The actuator provides a lightened clutch pedal load with more accurate control of the clutch and a constant adjustment feature conserving clutch linings, representatives said.

Still other applications of hydraulic actuators to road and farm machinery, including tractors, plows, combines, etc., are being studied. In other fields, the principles of controlled and pressurized flow of fluids are being applied to farm machinery which will combine milk and separate cream, and to hydraulic pressure paper cutters and other diversified machinery.

► **Was Work Not Neglected**—Pesco officials stressed the fact that their production was continuing full time on war production of aircraft pumps and other hydraulic and vacuum accessories and that their research studies of post-war applications have been made in materials between their wartime research problems, which have been

consistently assigned a top priority.

One spokesman indicated that while no actual post-war contracts have been signed, the company already has a backlog of informal commitments for various peacetime applications amounting to approximately 55 percent of its present production.

New Martin Plastic

A new application of plastics devised by the Glenn L. Martin Co., of Baltimore, has resulted in a 32 percent weight saving, 60 percent saving in tooling costs and a 50 percent reduction in overall costs in its first production use.

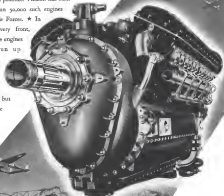
Used as a loop antenna mounting plate for the Martin PRM Harrier, the new composite material is made up from a high tensile surface material and a resin impregnated wood pulp core.

Heads Copper Co.

Frank Russell, general manager of the National Aircraft War Production Council who will direct the organization as a consulting basis after Sept. 1 (Aviation News, Aug. 31), has been elected president of Cerro de Pasco Copper Corp. and Cerro de Pasco Railway Co., succeeding Harold Kinsmill, who remains as consulting engineer and director.

THIS IS MUST BE GOOD

The battle record of American fighter planes plainly says, "They must be good!" ★ Here at home, our firm realize is that the engines we supply them must be good too—the best that care and precision and long experience can produce. Allison has built and delivered more than 30,000 such engines to the U. S. Army Air Forces. ★ In service that covers every front, planes powered by these engines have helped to run up an impressive score against enemy aircraft. ★ This is an indication of qualities useful not only in war but in engines to power the planes in which you will travel when peace has been won.



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A-1 and P-3—Mining
P-38—Kingpin

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KEEP AMERICA STRONG
BUY MORE WAR BONDS

Slash in DC-3 Operating Costs Presages Rise in Cargo Volume

Douglas staff report cites possibility of "tremendous" increase by reducing ton-mile costs approximately 65 percent for sea-level airports.

Possibilities of a "tremendous" increase in air cargo volume by effecting substantial reductions in sea-mile costs for Douglas DC-3 passenger aircraft operating out of sea-level airports was suggested in a staff report by Douglas Aircraft Co., Inc.

Pointing to the necessity of taking advantage of all possibilities for decreasing operating costs in order to insure an adequate volume of air cargo transportation, the survey concludes:

The overall reduction in operating costs from the present DC-3 passenger airplane to the DC-3 cargo airplane operating under revised regulations is approximately 65 percent for sea level airports, corresponding to a figure of 13 cents per ton-mile. This suggests that future costs of less than 10 cents per ton-mile are obtainable, which would result in a tremendous increase in air cargo volume.

Excesses Skipped—While some aviation quarters question certain of the suggested changes, as well as the author's method of computing possible ton-mile cargo costs, nevertheless they agree that "the effect of the considered changes on regulations on DC-3 type cargo airplane economy is of the same order of importance as the effects of basic design and operation, and so warrants careful consideration."

The purpose of the survey was to investigate the effects of the primary factors which may be expected to improve cargo airplane economy. It was restricted to DC-3 type cargo airplanes, and the results cannot be applied quantitatively to cargo airplanes in general. The results are based on cruising at 10,000 ft. on 98 percent rated power for stages of 200 to 1,200 miles. Sea-levels were considered, as follows:

1. Present DC-3 passenger airplane with SICG engines—take-off gross weight 35,200 pounds, and landing weight 24,400 pounds

2. Present DC-3 passenger airplane with SICG engines—take-off gross weight of 34,300 pounds, and landing weight 23,500

3. Same as (2) above except for the substitution of the PWA 25CG engine which has normal rating of 1100 BHP instead of 1080 BHP and has less efficiency rating on 98 octane fuel with water injection.

4. Equivalent to (3) above except that the airplane is a cargo airplane, with consequent reduction in fuel tanks, etc., of 600 pounds and with a crew of two instead of three.

5. Same airplane as (4) above except it is assumed that for cargo operation the payload factor can be increased from .85 to .90—the overhead costs can be decreased from 35 percent of direct costs to 67 percent—and the depreciation time can be increased from 15,000 hours to 20,000 hours.

6. Requires the use of war emergency ratings for meeting emergency climb requirements, and involves a 3 m.p.h. higher stalling speed than that obtained at a gross weight of 24,400 pounds. Some relaxation of minimum turn clearance requirements also would be required for this airplane.

Same Gross Weight—Operating from sea level airports, the survey suggests that by raising the gross weight on the cargo airplane from 23,500 pounds to 24,400 pounds operating costs can be decreased from 11 percent to 53 percent. A substitution of PWA 25CG engines for PWA SICG engines is recommended. This would raise costs 5 to 10 percent. A further reduction of between 14 percent and 34 percent in operating costs could be effected through changing from passenger to cargo interior and removing one crew member. This would result in a total weight saving of 830 pounds.

13 Percent Cost Save—Increased

airplane utilization, increased payload, load factor, and decreased overhead—"All of which should be obtainable in going from passenger to cargo operation"—would reduce operating costs 34 percent, the survey suggests.

Finally, the report says, the use of war emergency ratings for meeting the emergency climb requirement permits an initial gross weight of 26,700 pounds this, in conjunction with an increased landing weight (corresponding to a 5 m.p.h. increase in landing speed from the 24,400 pounds case) would reduce operating costs 33 percent to 39 percent.

Financial Reports

Kellogg Aircraft Corp. report for first six months of 1944 sales of \$3,724,815 compared with \$3,394,900 in the 1943 period and net earnings, subject to audit and year-end adjustments, of \$100,153 compared with \$101,087 for the same period of 1943. Current assets showed an increase from \$3,060,463 to \$3,153,900 since January 1, 1944, while current liabilities rose from \$2,174,158 to \$2,495,121. Retained profits before federal and state income taxes was \$466,930, with a tax reserve of \$406,314 established.

Bureau Corps. directors have voted a dividend of 40 cents a common share, payable Sept. 18 to stockholders of record Sept. 1. This brings Bureau dividend payments this year to \$1.20.

Mitchell to Direct Airline Tax Study

Civil Aeronautics Board has appointed George W. Mitchell, Tax Economist of the Federal Reserve Bank of Chicago, to direct the special study of multiple state taxation of airlines being made by CAR under Congressional mandate.

The multiple taxation problem grew out of a Supreme Court decision last spring which confirmed the right of individual states to tax airlines operating through them. Congress then authorized a 150-day study of duplicate taxation, made by the Board.

Ryan Bush Committee—CAR Member Oswald Ryan heads the investigating committee.

Mitchell was consulted by the Treasury Department in preparation of a report on intergovernmental fiscal relations.

Record War Cargoes Handled By Air in First Half of 1944

Total of 22 million pounds transported through joint operations of ATC, NATS and contract carriers on routes throughout world, OWT reports.

By DANIEL S. WENTZ II

More than 22,000,000 pounds of air cargo was handled by the world's largest air transport operation during the first six months of 1944, the Office of War Information reports. This approximate figure is based on data compiled by the Foreign Economic Administration, which is one of the largest chapters, the WPB, and the War and Navy Departments.

The total represents "inbound" cargo, but a substantial portion was carried by air only part of the way. Purchases by the FEA and other government agencies, including Army and Navy materials, accounted for 12 million pounds of the total materials for Russia and Great Britain comprised a seven million pound item, and private purchases by American importers of three million pounds complete the total.

Four Plane Types Used—Planes of the Air Transport Command, the Naval Air Transport Service and the contract carriers operating under them handled the cargo movement. Four main types of Army ships used are the Douglas C-54, the C-47 (converted B-24 Liberator), C-46 (Curtiss-Wright Commando), and the C-47 (Douglas DC-3). The Navy uses the B-24 (strapped-down DC-3), PB2Y-3 (Consolidated 4-engine Spruce Goose), PB4Y-2 (Martin Mariner, twin-engine flying boat), B-24 (Douglas Skyraider, Navy version of the DC-4), and the RV-2 (Consolidated 4-engine land plane).

One of the largest segments of the global air cargo system is the operation over the "hump" from China to India. Planes of the Air Transport Command and the

China National Aviation Corp. operate under Army contract, carry substantial quantities of mercury, tin, hog bristles, textiles, and drugs. As the critical portion of the route these materials travel is from China to India, a route portion of them is forwarded by rail to Calcutta and thence to final destination by steamship.

Mercury for Russia—Skat of the mercury brought out of China by air is destined for the U.S.S.R.

The materials are forwarded from China by FEA field agents, most of whom are Chinese graduates of American colleges.

Other chief cargo route is the so-called "main line" from Karachi, India, across Africa, the South Atlantic, and through South America and the Caribbean to ports of entry in the U.S.

This route has several loaders and branches—one from Beas and Tehran for Russian pretexts, chiefly platinum—another through Central Africa. The Soviet Overseas Airways Corp. and the Belgian Airline Sabena bring materials from South Africa to connect with the "main line" operations.

South American—Skat, in Brazil, is a great stocking center for cargoes from India and Africa. Feeder operations in South America funnel minerals, drugs, insecticides, diamonds and other South American products into Natal for onward shipment via NATS or ATC planes.

On the west coast of South America, planes of the South Air



LATEST SKETCH OF MARTIN MARS:

Trimity of the T24 for Mars flying boat above shown are now under construction by The Glenn L. Martin Co. for the U.S. Navy. Feature of the pro-

ducts reveals is the single rudder tail, more than 40 feet high. An early sketch of the Mars appeared on the cover of AVIATION NEWS, Mar. 20.

Service Command, cooperating with the FEA, have earned between 30,000 and 70,000 pounds of cargo to Panama for forwarding to the U.S.

Navy planes carry 10 percent of the South American cargo to the U.S. while the Army accounts for 70 percent.

•**Route**—Other routes, which carry a relatively small amount of the cargo total, are operated between Australia and San Francisco, across the North Atlantic from England, Sweden and England and from the Middle East.

Maintaining the constant flow of vital materials requires close cooperation with other United Nations governments. Within our own government, the cargo total was achieved by FEA-WFO-Army-Navy teamwork.

Ala. Port Parley To Open This Week

300 aviation experts and associated and state authorities expected to attend meeting at Auburn.

Approximately 300 persons are expected to attend the Southeastern Regional Airport Conference at Alabama Polytechnic Institute, Auburn, Ala., Tuesday, Wednesday and Thursday of this week.

The conference is sponsored by the college, the Civil Aeronautics Administration and the Alabama Aviation Commission and will draw aviation experts and manufacturers and state authorities from the seven states of the second region of CAA.

•**Four Main Sections**—The conference will be held in four main sections, covering airport planning, airport operations, the airport and the community, and airports and government. R. W. Stanford, director of Aeronautics for the State of Alabama, announced. Reg. Jennings Randolph (D., W. Va.), co-author of a joint resolution now before Congress calling for a national air policy commission, will be principal speaker at a banquet Thursday night.

Among those who will speak at the sessions are: W. M. Robertson, manager of the second region, CAA; George K. Garza, CAA, Washington; Dexter C. Moran, director of the South Carolina Aeronautics Commission; Frank M. Hulse, president of Southern Airways, Inc., Decatur, Ala.; Oliver L. Parks, president of Parker Air College; J. Kirk Baldwin, airport manager, specialist of the CAA, Boulder, Colo.; J. Stacey, director of the Michigan Board of Aeronautics; and L. L. Schroeder, commissioner of the Minnesota Department of Aeronautics.

Boston Port Plans To Be Prepared

Massachusetts state officials, determined that Boston shall become an important international air terminal, have announced the award of contracts for engineering and designing terminal buildings and ground facilities at Boston's Logan International Airport.

Thomas D. Cabot, chairman of

the Massachusetts Aeronautics Commission disclosed that two Boston firms, Goodridge, Shipley, Bulfinch & Abbott, and Thompson & Lohrner, had been selected to prepare a report on requirements of the field, including preliminary drawings of proposed buildings and approaches. The report is expected to be submitted to the state by Dec. 15.

Cost of designing is estimated at \$40,000.

Eire Rushes Work on Trans-Atlantic Ports

Plans for improvements to the airports which will serve as termini for North Atlantic air routes are being rushed in Eire, where the Ministry for Industry and Commerce recently announced that the Office of Public Works was making arrangements to place contracts for land surfaced runways at the Dublin Airport. Cost of improvements to the field is estimated at 200,000 pounds (300,000).

Work also is in progress at the Shannon base at Blymston on the River Shannon, which is planned to be the main flying base terminal rather than Foynes. The Ministry stated that Foynes became an international terminal pending completion of facilities at Blymston.

•**Delayed by Emergency**—The rapid development of trans-Atlantic air traffic and the preponderance of the emergency need necessary improvements at Foynes beyond the temporary installations planned by the government.



EDUCATIONAL DEVICES DEVELOPED BY CAA

Laboratory devices and visual teaching aids have been developed by the CAA Aviation Education Service for public school aviation curricula. Left, CAA's Dr. Edgar Palmer demonstrates a crash-oriented scale model of a radial aircraft engine which shows firing order, valve operation and cylinder and crankshaft motions. Inward, similar, center, demonstrates

a large-scale instrument designed to give a clear picture of the effect of camshaft, detent and drive-shaft on the camshaft timing of an aircraft in flight. Right, Bruce O'Hara, head of the Aviation Education Service, inspects a working scale-model wing, thrust which can be built successfully in a school laboratory.

Steamship Firms Seen Gaining In Fight to Operate Airlines

Grace Line and United Fruit file new plans for Caribbean and South American air service; National Federation of Shipping, on behalf of five largest ship owners' associations, asks end of discrimination against water carriers in consideration of air route applications.

Increasing indications that steamship operators will be permitted to engage in air transportation were seen by observers this week with some responsible quarters indicating to the belief that the civil aeronautics board would move to reverse its present policy against water carriers' participating in aviation.

Meanwhile, the ship lines intensified their drive for air routes at the Grace Line and the United Fruit Co. filed new and comprehensive plans for Caribbean and South American air service, and the National Federation of American Shipping, on behalf of the five largest ship owners' associations, appealed for an end to discrimination in consideration of route applications by steamship companies.

•**Cite Need of Strong Merchant Marine**—The Federation based its arguments mainly on the intent of the steamship lines to "provide air transport only in connection with their regular steamship services" and on the national desire to supply the U.S. with a strong post-war Merchant Marine. The first obviously is designed to meet the provision of the existing Civil Aeronautics Act while the second is believed to have far public support by the Maritime Commission for the shippers' position.

While centered on the air-sea question between the Commission and CAB, has not reached the public stage, the Commission makes no secret of its stand. Since 1947 it has advocated the steamship lines operate air service and earlier this year Vice Admiral E. S. Land, commission chairman, told the House Merchant Marine and Fisheries Committee that the Commission and the CAB "should advise each with the other" in matters wherein circumstances affect the maritime industry and should collaborate "not only when ship lines operate airlines but also at times when the American shipping industry does not operate airlines." Commission states this private-

ly that Admiral Land believes the Maritime Commission, as the CAB, should have authority over all transportation air service.

•**Historical Cases**—An indicative of the Commission's stand on the issue is its position to intervene in the Hawaiian Cases (Docket 651 et al.) which include the application of Matson Navigation Co. to set up an airline to Hawaii.

The shipping industry plays an active role in the "Hawaiian Cases" theme by asserting that after the war foreign competitors will operate airlines. Cargo traffic going to the lines of countries carrying the greatest passenger trade, it is declared. Further, it will be so long before U.S. steamship companies can put a fleet back on the seas, that foreign lines will have moved in with air service and captured the bulk of the traffic, crippling the U.S. Merchant Marine before it could achieve a competitive status.

•**Blocked by Maritime Commission**—The Maritime Commission has consistently urged that steamship companies launch coordinated air lines. The shipping industry as a whole was slow to accept the suggestion. Grace Line, United Fruit, Pan American in South America, and Matson helped finance the Pacific route, but American Export Lines was the only one to follow to any great extent the Commission's line of thought.

American Export was its original fight for air service on the basis that its airline would supplement its surface operations, but some coordination had both by the Shipping Federation. Although CAB, following a court decision, later decided the steamship line could not operate an airline, the Federation asserts the CAB misinterpreted the court's findings.

The dispute flared on Section 905 (b) of the Civil Aeronautics Act, which requires approval by CAB of certain of an air carrier by a non-air carrier. Approval may be granted if it is found that the other carrier will "use aircraft

to public advantage in its operation and will not restrain competition."

•**Investment Order Issued**—In granting American Export a certificate, CAB at first denied Section 905 (b) it was not applicable. On the court's deciding that it was, the Board re-opened the case, held a hearing on whether approval of steamship control of the airline should be granted under Section 404 (b) and issued its now famous investment order. In granting CAB's order was erroneous in the Shipping Act, CAB sees no legal bar to ship lines' operating air service provided it is to the public advantage.

Planning to use aircraft "is public advantage," ship lines which have applied for air routes are Atlantic Gulf and West Indies Steamship Lines, Grace Line, Inc., Matson Navigation Co., Moore McCormack Lines, Sosa Shipping Co., United Fruit Co. and Western Line. The United States Lines is expected to file shortly.

All plan to offer an integrated service, selling one-way-by-air, one-way-by-ship. While each will have the coordination of traffic, sales, communications and overhead expenses, the ship firms maintain they can furnish overwater air transportation possibly 50 percent cheaper than at present.

Burden Gets Preview Of Post-War Planes

See Airlines bigger than any yet announced on visit to Lockheed, Douglas and Hughes plants.

Post-war commercial airlines, bigger than any yet revealed in company announcements were shown in Los Angeles last week to William A. B. Burden, Assistant Secretary of Commerce, who visited the Lockheed and Douglas factories and Hughes Aircraft Co., where he viewed the program being set up on the giant Hughes flying boat.

The assistant secretary may now be presumed to have detailed industry information on the capacities and performance of projected air services, so as to their marketing possibilities. He also is understood to have canvassed major western aircraft manufacturers on the proximity of commercial air lines to be developed in the far future in commercial airline.

•**Confirmed with Staff**—No announcement of Burden's three-day

visit was made until he had returned from the coast.

In addition, he conferred with H. A. Hawk, regional manager of Civil Aeronautics Administration's sixth region, and 100 members of his staff.

In conference with CAA officials, the assistant secretary explored the hitherto little discussed problem of language barriers in relation to aviation. It has been generally overlooked that the fastest development of international air commerce depends to some extent on bridging existing linguistic differences.

Uniform Terminologies Urged—Hook suggested to Burden that international air conferences consider the adoption of uniform and basic terminologies to provide a universal intelligence of voice radio messages vital to international operations. As an example of a basic language, Hook cited the Chinook jargon, developed during the Alaskan gold rush era, which provided a basis for understanding among the diverse nationalities who gathered in the Far North. Hook disclosed that he already had suggested to the faculty of Stanford University consideration of the development of a uniform air commerce terminology as a post-war research project.

Automatic Weather Stations Developed

Automatic weather stations that require servicing only at intervals of several months have been put into service for the Altus and are playing a major role in supplying vital information.

The services permitted disclosure of the "Automatic weather stations," which have been spotted in remote areas from the arctic to the tropics to provide worldwide data for the armed services.

Developed for Navy—The stations were developed at the request of the Navy by the Precision Instrument Division of Bendix Aviation Corp. and consist of weather-proof insulated housing for intricate meteorological instruments and automatic radio devices in broadcast reports and data continuously gathered by recording instruments.

Some of the stations have been built in Greenland while others have been installed in arctic tropical islands of the Pacific and in other isolated sections where weather developments affect future operations.



PICK-UP LINE OFFICIALS VISIT BRAZIL

Feasibility of establishing an airmail pick-up system in Brazil is being investigated by Charles W. Wendt (center), vice-president-treasurer of All American Airways only U. S. pick-up line. Mrs. Richard C. Dwyer (right), member of All American's Board of Directors, and Mrs. Wendt are also making the trip. Wendt will speak with Brazilian government officials, airline executives, and financial and economic authorities. Photo shows party leaving for Rio de Janeiro.

L. A. Renewed Bid For "Air Capital" Title

Purchase of 1850 acres adjoining airport planned in move to keep pick-up line air corridor, now perched by San Francisco plan.

Despite its leadership in warplane manufacture, Los Angeles has received warning that it may lose its post-war air resources to San Francisco if Los Angeles airport facilities are not expanded immediately.

A blow to civic apathy was struck recently when plans were announced for expansion of metropolitan Los Angeles airport.

Air Capital Title at Stake—Ready to insist that the city's have true business mind, San Francisco, vigorously in its airport planning, may steal the title of "Air Capital of the West," Los Angeles airport commissioners now propose.

Purchase of an additional 1850 acres of low-cost land west and north from the existing partly-developed 440-acre airport.

Raising by bond issue or otherwise an unestimated sum to complete in two stages improvements shown in the accompanying map.

Los Angeles Airport manager, Woodruff DelValle, new first vice-president of the American Association

of Airport Executives, believes that stage I improvements will permit the handling of 150 flight movements per hour, the "ultimate airport" being designed for 240 per hour.

Semi-Labry Plan—He terms the proposed layout a "semi-Labry plan", adopting to land available runway proposals made by Hans J. Lubig of the Civil Aeronautics Administration's engineering division.

Abandoned now because of the high cost of land that would be needed, is DelValle's previous plan for a free-stop development of Los Angeles airport.

\$2,000,000 for Land—The Los Angeles Airport Commission believes that five owners of the 1850 acres now proposed for purchase will sell for slightly under the \$2,000,000 immediately available (from a prior bond issue) for airport expansion.

DelValle's "expandable airport" would have cost, fully "expended," close to \$20,000,000.

Fate of the new airport proposal hinges on the ability of airport enthusiasts to sell civic leaders and business groups to the point of putting over a new bond issue to cover stage I development. An unofficial guess is that close to \$10,000,000 might be required.

May Revive Old Plan—Reversal of the "Los Angeles-San Francisco

freed" which Los Angeles used to good advantage to push harbor and industrial growth, may be used to advantage in the airport campaign.

No support from Los Angeles Airport Commissioners may be expected for the proposal by Dwight Glavin, architect of the Los Angeles Development Business Men's Association, that billings of downtown Elroyan Park be allowed off to build a \$50,000,000 airport that will be within five minutes of the city's shipping and hotel center.

12 Minute Motor Freeway—City planners believe construction of a 12-minute motor freeway from the central business district to the Los Angeles Airport area is inevitable and that a major airport is indicated for anticipated heavy post-war commerce.

Today major air lines terminating at Los Angeles use Lockheed Air Terminal, 45 minutes from downtown, and draw their trade from the sprawling metropolitan southern harbor district through Long Beach Airport. They have contacts with the city to move terminal operations to Los Angeles Airport when and if operating facilities (runways and buildings) become available.

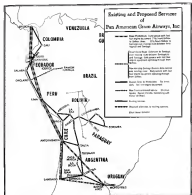
Objection Delays Panagra Peru Route

An objection to a proposed Pan American-Globe Airways route in Peru, introduced by Campaña de Aviação Fausto at a recent Civil Aeronautics Board prehearing conference, has delayed the proceeding temporarily, says the fact that the Peruvian Government was understood to have requested revised CAR action on the application.

The trade asked by Panagra would link Chiclaya, on Peru's west coast, with Iquitos, an isolated interior city, connecting there with an extension of their air line to the upper Amazon River routes to form a South American transcontinental air route.

Service Held Indispensable—Fausto, a small Peruvian airline, operates over a similar route to that sought by Panagra. It is also understood to be rendering a charter service to the United States Rubber Development Corp. Panagra will continue to be existing airline service is inadequate.

Public comment requested that Panagra submit evidence to show whether the disagreement between the line's direction will affect the Peruvian route proposal.



PANAGRA EXPANSION PLANS:

Map above shows proposed new and proposed services for which Civil Aeronautics Board approval is being sought by Pan American-Globe Airways. Great circle routes would bring Lima, Peru, (2,720 miles) within 14 hours and Buenos Aires, Argentina, (2,721 miles) within 23 hours of New York. Panagra officials have announced that plans for the proposed services are based upon the use of Lockheed Constellation or Douglas DC-7A. Night flying service also is planned.

Panagra's attorneys were unaware at the Federal objective of a year-long survey of the possibilities of handling perishable cargo by air. Cargo shippers are distinctly interested in coast-to-coast overnight delivery of foods to eastern markets.

The plane used was a newly-converted DC-3 being ferried east for the opening of United's third daily transcontinental all-night schedule.

Perishables Flown From Coast to N. Y.

Fruits, vegetables, seafood and flowers carried by UAL in converted DC-3.

A United Air Lines converted DC-3 cargo carrier completed the first transcontinental air shipment of perishable fruits, vegetables, flowers and seafood from the West Coast to New York last week.

The food was served as "airborne perishable chum" luncheon at New York's Waldorf-Astoria, sponsored by United, Wayne University, and the Great Atlantic & Pacific Tea Co.

Perishable Made—The three

organizations are engaged in a year-long survey of the possibilities of handling perishable cargo by air. Cargo shippers are distinctly interested in coast-to-coast overnight delivery of foods to eastern markets.

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OK Joint Port Use

Army and Navy have agreed on procedures for joint Army-Navy use of airfields. The agreement covers construction, maintenance, upkeep and repair facilities and operation of utilities.

Generally speaking, the service originally establishing the field will direct construction, using the standard of that service, with payment to be made by the service needing the facilities. Operation of utilities also will remain under control of the service under jurisdiction of which the field came.

UAL, Matson Fare-Cut Plans Peril PAA Coast-Hawaii Domination

Exhibits filed in CAB proceedings indicate United proposal to slash rates to less than half Pan American's charges; ship line offers combination of reduced charges.

A serious threat to Pan American Airways' pre-war position as sole operator between the West Coast and the Hawaiian Islands was seen in exhibits filed by applicants in CAB's West Coast-to-Hawaii proceeding in which both United Air Lines and Motors Navigation Co. propose fares considerably below Pan American's last published rates.

Pan American's former tariff was \$276.50 one way—\$500 round trip. United estimates a one-way fare of \$125 using four engined land planes of the DC-4 or similar type carrying 50 passengers by day or 34 as a sleeper.

► **May Reduce Fares** — Should United be certificated to fly the Hawaiian route, Pan American would presumably be forced to reduce its fares comparably to compete for traffic.

Through connections over its

domestic system, the line also might get many passengers formerly carried by Pan American or steamship companies.

United plans schedules leaving the Atlantic seaboard in the morning and arriving in Hawaii early the next morning. Flights from Chicago would reach the islands in 18 hours.

► Night Schedules—Proposed night schedules between the West Coast and Hawaii leave California at 8 p.m. and arrive at Honolulu at 8:30 a.m. Day schedules are arranged to make the trip between 8:30 a.m. and 7 p.m.

United also proposes that the three cents per pound-mile mail rate it receives for its domestic operations be extended to the international rate.

Attorneys for United are expected to adopt the line of argument that the Honolulu route is an extension of the line's domestic system and not an international route.

5 Ship-Rate Wars—Maison Maritime Co., the only ownership operator seeking an air route to Hawaii, announced a series of combination fares permitting passengers to travel by plane or ship or a combination of the two. Maison's lowest plane fare is \$175 one-way by day, with a 10 percent reduction for round trips. The night fare of \$300 includes berth and a similar reduction for the round trip.

Under the combination plan, Mission would charge \$202.50 for the round trip of the steamship portion in cabin class; \$365.00 for first class steamer accommodations.

► **Steamer Fares Cut**—The line also announced steamer fares of \$63 one way (cabin class) and \$139 one way (first class), with a ten percent round trip reduction. These lowered rates would almost certainly have some diversionary effect upon potential air passengers between California and Hawaii.

Matson proposes to invest from eight to nine million dollars in air transport operations, most of it to purchase 2 DC-4's. Two



ELECTED BY AA:

Terrill C. Driskwater, who recently resigned as executive vice-president and general counsel of Continental Airlines, has been elected a vice-president of American Airlines in charge of route development effective Sept. 2. He succeeds the late Hollis B. Thompson.

flights daily from San Francisco-Los Angeles and two weekly from Seattle-Portland are planned. The company estimates an annual travel of 100,000 passengers between Hawaii and California and an additional 11,000 between Hawaii and the Pacific Northwest. It believes that a "very large" group will want to use the Macon combination plane-steamship ship.

Ex. A, to Expand Airport—On the West Coast, the Los Angeles Airport Commissioners proposed plans for expansion of the city's airport facilities by purchase of 1,200 additional acres of land and raising funds for its improvement by a bond issue or other means.

The Los Angeles Chamber of Commerce will present a 100-page exhibit when Civil Aeronautics Board hearings on the Hawaiian routes open.

Foreign Applicants, Six Interviews—Applicants for the route are Hawaiian Airlines, Ltd., Matson Navigation Co., Northwest Airlines, Western Air Lines, United Air Lines and Ryan School of Aeronautics. Pan American Airways, the Ports of Seattle and Tacoma, Wash., and Portland Ore., Inter-Island Steam Navigation Co. and the Department of Justice are interviewers.

CAB examiners Thomas L. Wynn and Lawrence J. Koster will hear the case. Hearings will open Sept. 5.



PHOTOELECTRIC WIRE

United Air Lines has adopted the "Telefax" automatic photoelectric telegraph device to speed transmission of records between its offices at Oakland and San Francisco. Morris T. Cook (left), Western Union agent, and H. L. Harrison, communications department manager of United's Western division, inspect a transmission report transmitted from the Oakland station. Report is inserted in a slot in the transmitting unit where a photoelectric cell transmits it into electric impulses sent by wire.

New ACCA Blue Book Lists Plane Parts

Compilation of billing descriptions constitutes only authorized source of such information for aircraft traffic summaries.

Filing a long-recognized need, comprehensive listing descriptions have been compiled by the traffic department of the Aeronautical Chamber of Commerce in a newly issued Blue Book of Airplane Data.

It provides the only authorized source of such information for aircraft traffic executives and the Chamber reports that savings to aircraft manufacturers and to the government of as much as 53 percent may be effected on freight shipments through industry use of the follow-up documents.

5 Parts Listed—The Blue Book lists various parts entering into aircraft construction under their technical and common names and shows the manner in which the shipment should be billed to the carriers, assuring application of the lowest shipping rate.

Billing descriptions used are from the railroad consolidated freight classification and readily apply to articles moving under class rules and where the items

are shipping under commodity rates, or under exceptions to the classification. Interpretations can be worked out in accordance with the information provided by the APCA traffic department.

NAA Asks Plane Gas Tax Benefit Flying

Upper end of federal levy and application of all state funds collected on airplane fuels to development of aviation.

Retirement of the federal government from taxing aviation gasoline and other fuels and application of all state taxes on aviation gasoline to the general development and benefit of aviation are advocated by the National Aeronautic Association.

After a referendum by the board of directors, the NAA governors recommend to the commissioners on uniform state laws an act to provide for exclusive application of all aviation gasoline taxes to aviation development.

Uniform Law Asked—NAA further invites the endorsement by all aviation groups of a uniform state

law to provide for the exclusive application of all aviation gasoline tax to aviation development.

While the NAA is not specific in recommending the uses to which such tax funds would be put, it is assumed they would be used for development of airports and other landing facilities, for the support of state aviation commissions and general aviation education.

Motor Gas Tax Used for Roads—Many states use the state gasoline tax funds for development of highways, bridges and other facilities for motorists and the theory behind the action is that the users of aviation fuel who would pay the taxes should benefit directly.

The proceeds from state automobile gasoline taxes have reached such proportions in some states as to become a subject of controversy between those who would like to divert part of the revenues to general state funds and those who insist that the motorists who pay the tax should receive the benefits in improved parking facilities.

Proposals for a state aviation gas tax possibly would become involved in this difference of opinion, particularly in those states where revenue would be sizable.

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A World A.T.A.

THE UNITED STATES GOVERNMENT would favor establishment of a world air transport association comprising all international commercial operators and would give its approval specifically if U. S. airlines took the initiative. *AVIATION NEWS* is informed officially.

The probable need for a conference of international air carriers, like that of the shipping companies, has been recognized by the government since its beginning of investigations into America's post-war position in world-wide civil aviation. Some officials have reduced their views on this matter to writing and these have been studied on high levels.

A substantial segment of the air transport industry in this country believes facts that such an organization will be essential, and plans for its establishment are being considered. In some industry circles formation of the conference is considered inevitable.

It is the feeling of officials, of course, that many matters relating to regulation of international aviation will be settled in inter-governmental agreements, but they point out that other problems of both technical and legal nature will confront carriers and perhaps had best be left to consideration of a conference of the carriers.

Airline executives who favor the conference stress that they, better than governments, will be able to iron out many important operational and other problems and will know better how to go about protecting their self-interests.

Enthusiasm for a conference of international air carriers also is evident in foreign countries. The I. A. T. A. had become virtually such a conference when the war in Europe began in 1938. A meeting scheduled to be held in New York, September, 1940, was called off course by the outbreak of the war. At that time the I. A. T. A. comprised 29 airlines, including Pan American Airways, representing 24 countries.

Dr. D. Goodrich, Secretary General of I. A. T. A., covered several months ago from Holland and now has prepared an extensive report on I. A. T. A. which he proposes to be used as a basis for discussion in reviewing that body. The report was forwarded to this country by the American Embassy in London on behalf of Dr. Goodrich. It states that the need for an I. A. T. A. is "universally felt" and the original organization was "successful" because "externally as well as internally there exists a strong solidarity of interests between those engaged in the operation of international airlines." Dr. Goodrich points out:

Internal Relations—"The self interests of the air traffic companies are furthered by a central body because they can have their wishes complied with to a much greater degree than would be possible if these wishes were put forward by them individually, a central body can furthermore protect them from measures which would have an adverse effect on development of aviation." He states that I. A. T. A. obtained "far-reaching" results in the field of air legislation, in the postal field, in the field of air communications and in getting action to alleviate frontier barriers imposed on operators by various governments. A general increase in international air travel safety was obtained also, Dr. Goodrich says.

Internal Relations—"The interdependence of air

carriers is infinitely greater than the interdependence of carriers by air by land conducting international communications." Problems which arise from an international journey can be solved only through a central body, it is said. Some of these problems (schedules, rates, booking for a through journey via several airlines, conditions for carrying on baggage and goods, carrier liability, accountability among successive carriers).

In the I. A. T. A. proposed, "business questions will be treated by business methods," and political matters will be avoided. Dr. Goodrich suggests a permanent body with three regional organizations to handle regional matters; these might be in Europe at the Hague, in East Asia at Singapore and in North America at Washington.

The project deserves immediate consideration by the members of the Air Transport Association.

Wasting Airliner Space

RECENT SUGGESTION by Office of Defense Transportation that airlines continue care in advertising lest they appear to encourage travel implied more vociferous than the record shows. The airlines have confessed stupidity in a program actually stopped shortly after Pearl Harbor.

There have been few cases of misuse of advertising space and, as Col. Edgar S. Gurnell, president of Air Transport Association, says in a reply to Col. J. Monroe Johnson, ODT director, the few exceptions were mainly the result of an individual's failure to anticipate the exact effect of the advertising copy involved. At the same time, Col. Gurnell makes the significant point that no other transportation industry has been peddled so carefully on this subject. A survey of railroad advertising should be made. It is fair to assume that the Association of American Railroads occurred a similar warning from Col. Johnson.

The airlines' problem, however, is increasing as Army transports join the commercial fleets.

Both ODT and the industry seek fullest possible use of passenger capacity for the war effort, but hundreds of persons on vital war missions automatically are taking slower transport means every day because they do not know enough about the workings of the air passenger priority system and their chances of obtaining airline seat space. This means, in the aggregate, a sizable number of empty, wasted seats week in and week out.

While there apparently is no objection of the airlines restricting their arrangements to single listings of new services, this policy deserves immediate revision when the European war ends and more planes go to the lines. Those added planes will mean better service for war industry men trying to eliminate the Japanese enemy. The more carriers of ferry pilots, government officials, and leaders of industry who are "in the know" will be more speedily moved by an airline's 10 transcontinental schedules a day than by five. But thousands of other essential travelers who have no knowledge of additional seats will never learn of them from more timorous rank in the local newspaper. Waste of airline facilities will be an unnecessary and unfortunate for the national welfare as is misuse of insufficient space today.

ROBERT H. WOOD



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While the problem of interference from high-tension ignition systems has been largely overcome, noise from other electrical wiring in the plane has made itself more apparent. Titeflex Aerocon—which helped solve the problem on high-tension ignition cables—this same conduit can and should be utilized by manufacturers of air frames to dampen

the interference of all electrical wiring—high or low-tension.

Titeflex Aerocon is available in all diameters for which conduit is required. The use of complete assemblies manufactured by Titeflex insures interference-free operation of radio and electronic devices on America's fighting aircraft. Titeflex engineers are prepared to cooperate with aircraft builders, and manufacturers are invited to submit their specifications.

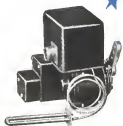
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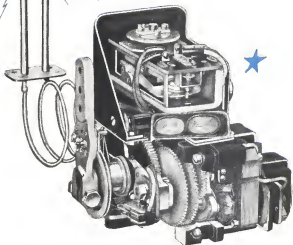
Compact temperature controlled actuator especially adopted for anti-ice applications. Arm rotation adjustable within range of 30 to 120 degrees. Torque output up to 75 inch-pounds.



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White-Rodgers modulating temperature controls and Servo actuators can be adopted to most designs requiring the safety of automatic local or remote temperature control. They have been designed especially for the control of:

- CABIN TEMPERATURE
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On request, engineering data will be sent to authorized manufacturers concerned with the above or similar applications.



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